SAFETY PRECAUTIONS

SERVICE WARNING

Only qualified service technicians who are familiar with safety checks and guidelines should perform service work. Before replacing parts, disconnect power source to protect electrostatically sensitive parts. Do not attempt to modify any circuit unless so recommended by the manufacturer. When servicing the receiver, use an isolation transformer between the line cord and power receptacle.

SERVICING THE HIGH VOLTAGE AND CRT

Use EXTREME CAUTION when servicing the high voltage circuits. To discharge static high voltage, connect a 10K ohms resistor in series with a test lead between the receiver ground and CRT anode lead. DO NOT lift the CRT by the neck. Always wear shatterproof goggles when handling the CRT to protect eyes in case of implosion.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering X-ray radiation. In solid-state receivers and monitors, the CRT is the only potential source of X-rays. Keep an accurate high voltage meter available at all times. Check meter calibration periodically. Whenever servicing a receiver, check the high voltage at various brightness levels to be sure it is regulating properly. Keep high voltage at rated value, NO HIGHER. Excessive high voltage may cause X-ray radiation or failure of associated components. DO NOT depend on protection circuits to keep voltage at rated value. When troubleshooting a receiver with excessive high voltage, avoid close contact with the CRT. DO NOT operate the receiver longer than necessary. To locate the cause of excessive high voltage, use a variable AC transformer to regulate voltage. In present receivers, many electrical and mechanical components have safety related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For SAFETY, use only equivalent replacement parts when replacing these components.

GENERAL GUIDELINES

Perform a final SAFETY CHECK before returning receiver to customer. Check repaired area for poorly soldered connections, and check entire circuit board for solder splashes. Check board wiring for pinched wires or wires contacting any high wattage resistors. Check that all control knobs, shields, covers, grounds, and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.

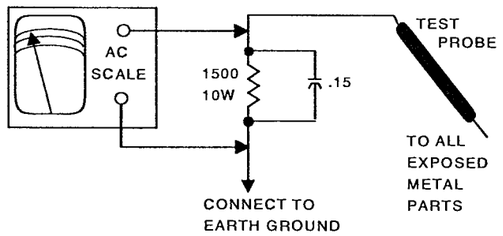
SAFETY CHECKS — FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 1M ohms and 5.2M ohms. Parts without a return path must measure infinity.

Hot Leakage Current Check

Plug the AC cord directly into an AC outlet. DO NOT use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15µF capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point. Voltage measurements should not exceed .75VAC, 500µA. Any value exceeding this limit constitutes a potential shock hazard and must be corrected. If the AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.



HIGH VOLTAGE SHUTDOWN TEST

Momentarily apply a short between test points XRP1 and XRP2. The receiver should lose raster and sound. If receiver does not lose raster and sound, the shutdown circuit should be repaired. To resume normal operation, remove the short for approximately 2 seconds and then the receiver will turn on by itself.

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by SAMS Technical Publishing, LLC as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to SAMS Technical Publishing, LLC by the manufacturers of the specific type of replacement part listed.

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PHOTOFACT® SILVER *Technical Service Data*

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- System Control 2
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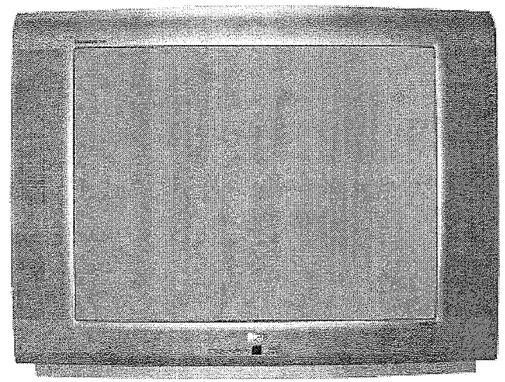
Tuner Information 1

For a Complete List of Manuals, Visit www.samswebsite.com

RCA

Model 36V430TYX1 (Chassis ITC008HYN)



Representative Model

Essential coverage for servicing a television receiver...

- **Schematics**
- **Component locations**
- **Parts list**

Coverage includes this additional model and chassis:

Model	Chassis
32V430TYX1	ITC008GYN

SAMS™ Technical Publishing LLC

MAY 2005 SET 5020

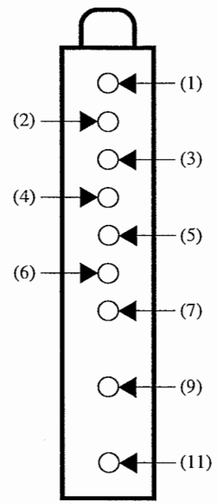
TUNER INFORMATION

TUNER VOLTAGE CHART

Pin	VHF Low Band	VHF High Band	UHF Band
(1) AGC	2.5V	2.7V	3.3V
(2) TU	2.9V	4.5V	5.3V
(3) AS	1.1V	1.1V	1.1V
(4) CL	4.8V	4.8V	4.8V
(5) DA	4.8V	4.8V	4.8V
(6) UB	5.0V	5.0V	5.0V
(7) +5V	5.0V	5.0V	5.0V
(9) +33V	33.0V	33.0V	33.0V
(11) IF1	0V	0V	0V

NOTE: VHF Low Band voltages taken on channel 2.
VHF High Band voltages taken on channel 7.
UHF Band voltages taken on channel 14.

TUNER TERMINAL GUIDE



TEST EQUIPMENT

Test equipment listed by participating manufacturer illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.

Equipment	Sencore No.
Oscilloscope	SC3100
Generators	
RGB	CM2125
Multiburst Signal	VG91
Color Bar	VG91
TV Stereo	VG91
Digital VOM	SC3100
Frequency Meter	SC3100
Hi-Voltage Probe	HP200
Accessory Probes	TP212
Isolation Transformer	PR570
Capacitance Analyzer	LC102
CRT Analyzer	CR7000
AC Leakage Tester	PR570
Inductance Analyzer	LC102
Flyback Yoke Tester	TVA92
Field Strength Meter	SL753
Transistor Tester	TF46
Horizontal Analyzer	HA-2500
Video Analyzer	VG91, TVA92

MISCELLANEOUS ADJUSTMENTS

SERVICE MENU

The following adjustment procedures are accessed thru a service menu. To access the service menu, turn the receiver on, using the front panel controls, press the volume - button and hold it down, then press and release the power button. Press and release the menu button. Release the volume - button. The screen will display a one line menu, on the left the parameter P00, and on the right the value of that parameter. Adjustments are made by selecting the proper parameter and changing the value of that parameter. To change the parameter number use channel up and down buttons. To adjust the current value of that parameter use volume + and - buttons. This information is listed at the beginning of the alignment. When these parameters are modified, the T-Chip and the corresponding EEPROM are updated. All service adjustments are bus controlled, except focus and screen.

NOTE: Before making any changes to any of the values, record the On Set values. In order to adjust the RF AGC, audio or video levels, tuner, PIP, or stereo circuits, the ChipperCheck hardware, a TV/PC interface box, and the software must be used. This can be purchased from Sencore Electronics @ 1-800-SENCORE.

SERVICE ADJUSTMENT PARAMETERS

Parameter No.	Display	Parameter Name	On Set Value	Value Range	Comment
00 (1)	-	-	Must be set to 76.	-	May not advance until value is set to 76.
01	ERR1	Error Code 1	0	0 - 255	Displays the first error detected. Set to 0 before exiting. See Error Codes Chart.
02	ERR2	Error Code 2	0	0 - 255	Displays the second error detected. Set to 0 before exiting. See Error Codes Chart.
03	ERR3	Error Code 3	0	0 - 255	Displays the last error detected. Set to 0 before exiting. See Error Codes Chart.
04	VG2	VG2	3	0 – 3	Read only, do not change value.
05	BCF	Read BCF Status	0	0 – 1	Read only, do not change value.
06 (2)	VS	Vertical Slope	35	0 - 63	Tune in a crosshatch pattern, adjust until the center is just visible.
07	VSH	Vertical Shift	28	0 - 63	Tune in a crosshatch pattern, adjust for slight overscan vertically.
08 (2)	VA	Vertical Amplitude	45	0 - 63	Tune in a crosshatch pattern, adjust for best linearity vertically.
09	HSH	Horizontal Shift	39	0 - 63	Tune in a crosshatch pattern, adjust for slight horizontal overscan.
10	SC	S Correction	25	0 - 63	Tune in a crosshatch pattern, adjust to center the pattern on the screen.
11	EW	EW Width	32	0 - 63	Tune in a crosshatch pattern, adjust for slight horizontal overscan.
12	PB	EW Parabola Width	32	0 - 63	Tune in a crosshatch pattern, adjust for straight vertical lines on left and right of the center.
13	UCP	EW Top Corner Parabola Tilt	32	0 - 63	Tune in a crosshatch pattern, adjust for straight vertical lines on top left and right corners.
14	LCP	EW Bottom Corner Parabola	32	0 - 63	Tune in a crosshatch pattern, adjust for straight vertical lines on bottom left and right corners.
15	TP	EW Trapezium	32	0 - 63	Tune in a crosshatch pattern, adjust for best compromise on left and right of vertical lines.
16	HP	Horizontal Parallelogram	32	0 – 63	Tune in a crosshatch pattern, adjust to set vertical lines perpendicular to horizontal lines.
17	HB	Horizontal Bow	32	0 - 63	Tune in a crosshatch pattern, adjust for straight vertical lines on top and bottom.
18	VX	Vertical Zoom	32	0 - 63	-
19	AGC	AGC	28	0 - 63	-
20	CDL	Cathode Drive Level	08	0 - 15	-
21	SBRI	Sub Brightness	09	1 - 17	Tune in a gray scale pattern, adjust to have first bar black and distinction between other bars.
22	SCOL	Sub Saturation	11	1 - 17	Tune in an air signal, adjust for best color.
23	SHUE	Sub Hue	08	1 - 17	Tune in an air signal, adjust for best flesh tone.
24	BLOR	Black Level Offset Red	35	0 - 63	See the color temperature adjustment.
25	BLOG	Black Level Offset Green	33	0 - 63	See the color temperature adjustment.
26	WPR	White Point Red	20	0 - 63	See the color temperature adjustment.
27	WPG	White Point Green	20	0 - 63	See the color temperature adjustment.
28	WPB	White Point Blue	18	0 - 63	See the color temperature adjustment.
29	PW	Peak White	(3)	0 - 63	Set to the values of White Point Red, Green, and Blue.
30	YDL	Y Delay Adjustment	05	0 - 15	-
31	SOC	SOC	3	0 - 3	-
32	OIF	Offset IF	32	0 - 63	-
33	GE	GE (For Kidpass Activation)	0	0 - 1	Value 0 = Enable, value 1= Disable. To reset the password, with the set off press and hold the volume down on the front panel, and the clear button on the remote for at least 5 seconds.

(1) Pass number for service adjustment parameters.
(2) Misalignment of Vertical Slope (Parameter 6) and Vertical Amplitude (Parameter 8) can trigger the Pin Cushion Board to activate the shutdown circuit. In this case temporary disconnect BL101 on the Pin Cushion Board to restart the unit and reset both parameters.
(3) White Point Red = 20, White Point Green = 20, and White Point Blue = 18.

HIGH VOLTAGE CHECK

Tune in a picture. Set brightness, contrast, and color to minimum. Connect a high voltage probe to CRT anode. High voltage should measure 26kV to 28kV.

PIN CUSHION

NOTE: This adjustment is used only on 4/3 sets.

Tune in a crosshatch signal. Adjust brightness, contrast, and color for 50%. Turn PL140 control full counter clockwise, located on the E/W board. Put the set in service mode, check Horizontal Shift (Parameter 09) and adjust if needed. Check Vertical Slope (Parameter 06), Vertical Shift (Parameter 07), Vertical Amplitude (Parameter 08), and adjust if any adjustment is needed. Adjust PL140 control for slight overscan. Adjust PL141, for straight vertical lines on the left and right edges of the display. Adjust PL143 for the best compromise on the left and right of the vertical lines. Repeat adjusting the controls to obtain straight vertical lines over the entire screen.

COLOR TEMPERATURE

NOTE: Allow the set to warm up for at least 15 minutes before performing the color temperature adjustment.

Turn on the set, access the main menu, select Picture, then select Picture Preset, and then select Natural. This will reset the customer controls. Tune in a gray scale stair case pattern, place the set into service mode, adjust Black Level Offset Red (Parameter 24) and Black Level Offset Green (Parameter 25) to value of 42. Adjust White Point Red (Parameter 26) to value of 10. Adjust White Point Green (Parameter 27) and White Point Blue (Parameter 28) to produce the best gray tones in the first bars of the gray scale.

Readjust White Point Red (Parameter 26) to produce the best picture quality. Adjust Black Level Offset Red (Parameter 24) and Black Level Offset Green (Parameter 25) for the best white level on the last steps of the gray scale.

Adjusting biases and drives may affect the overall brightness. Check the low light to high light gray scale tracking. Repeat the procedure, if necessary, to obtain the best performance. Tune in an air signal and adjust the brightness for best picture in normal room lighting. If screen control is adjusted after the color temperature alignment is complete; the color temperature should be checked again to ensure that it has not been affected by adjusting the screen control.

ERROR CODES CHART

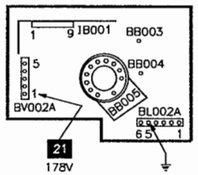
Error Code DEC	HEX	Error Location	Condition Indicated
0	00	No error code	-
136	88	IS100	IS100 fails to acknowledge.
138	8A	IX401	IX401 fails to acknowledge.
194	C2	Tuner	Tuner fails to acknowledge.

ERROR CODES

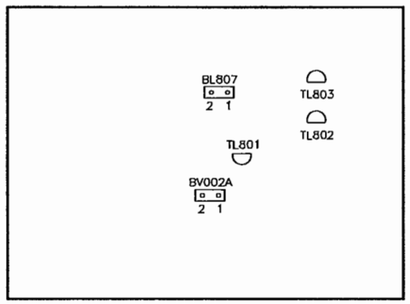
If certain failures occur, the matching error codes will be stored in the EEPROM. These error codes will be displayed in Parameters 01, 02, and 03. The first failure error code will be stored at Parameter 01 and the second failure error code will be stored at Parameter 02. Parameter 03 will be updated to display the most recent failure occurred in the chassis. If a failure of a bus IC occurred, the normal acknowledgment checking of that bus will be disabled in the service mode and the address of that IC which failed will be stored in one of the error code parameters. After every repair is done to the chassis it is recommended to check the error code parameters and reset them back to value 0.

PLACEMENT CHART

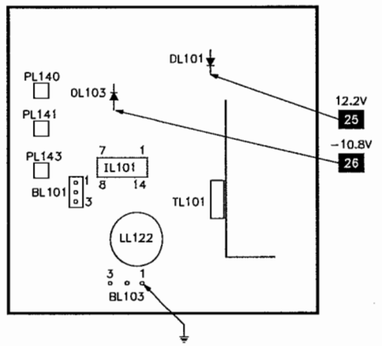
CRT BOARD



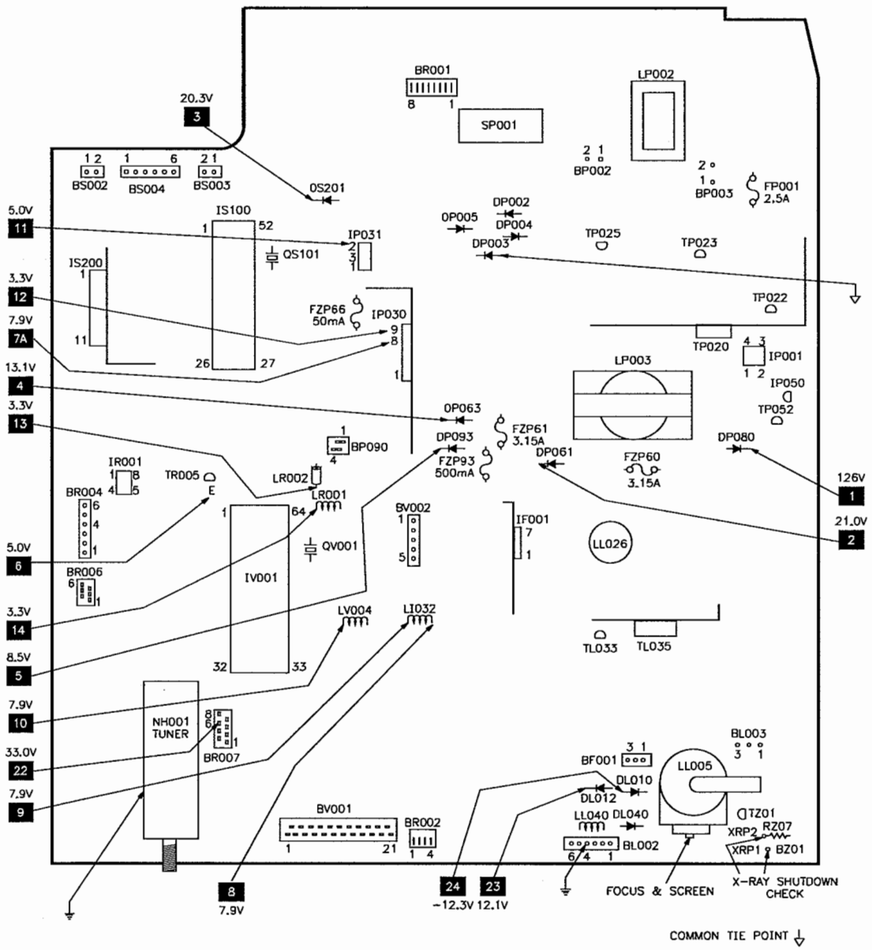
EFC BOARD



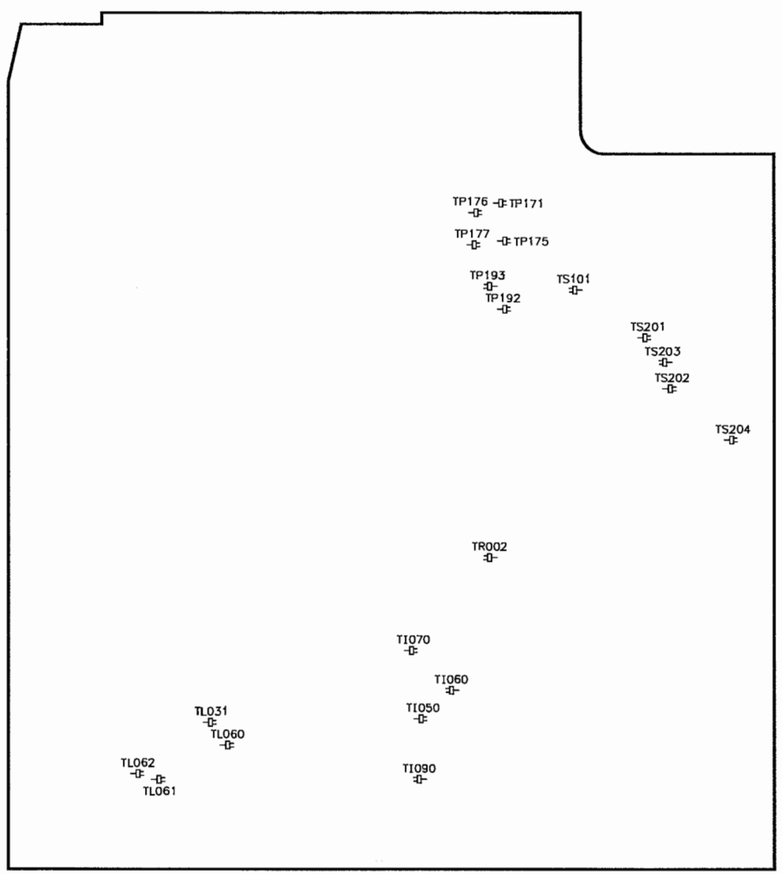
PIN CUSHION BOARD



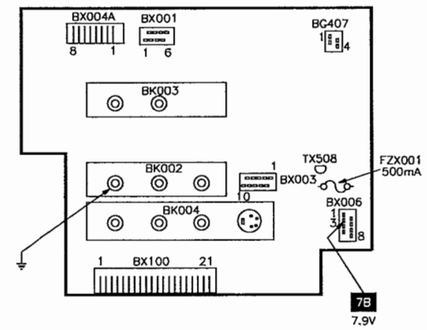
MAIN BOARD - TOP VIEW



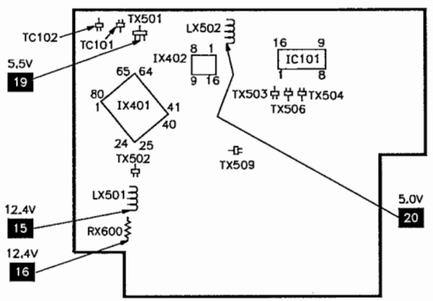
MAIN BOARD - BOTTOM VIEW



MAV BOARD - TOP VIEW



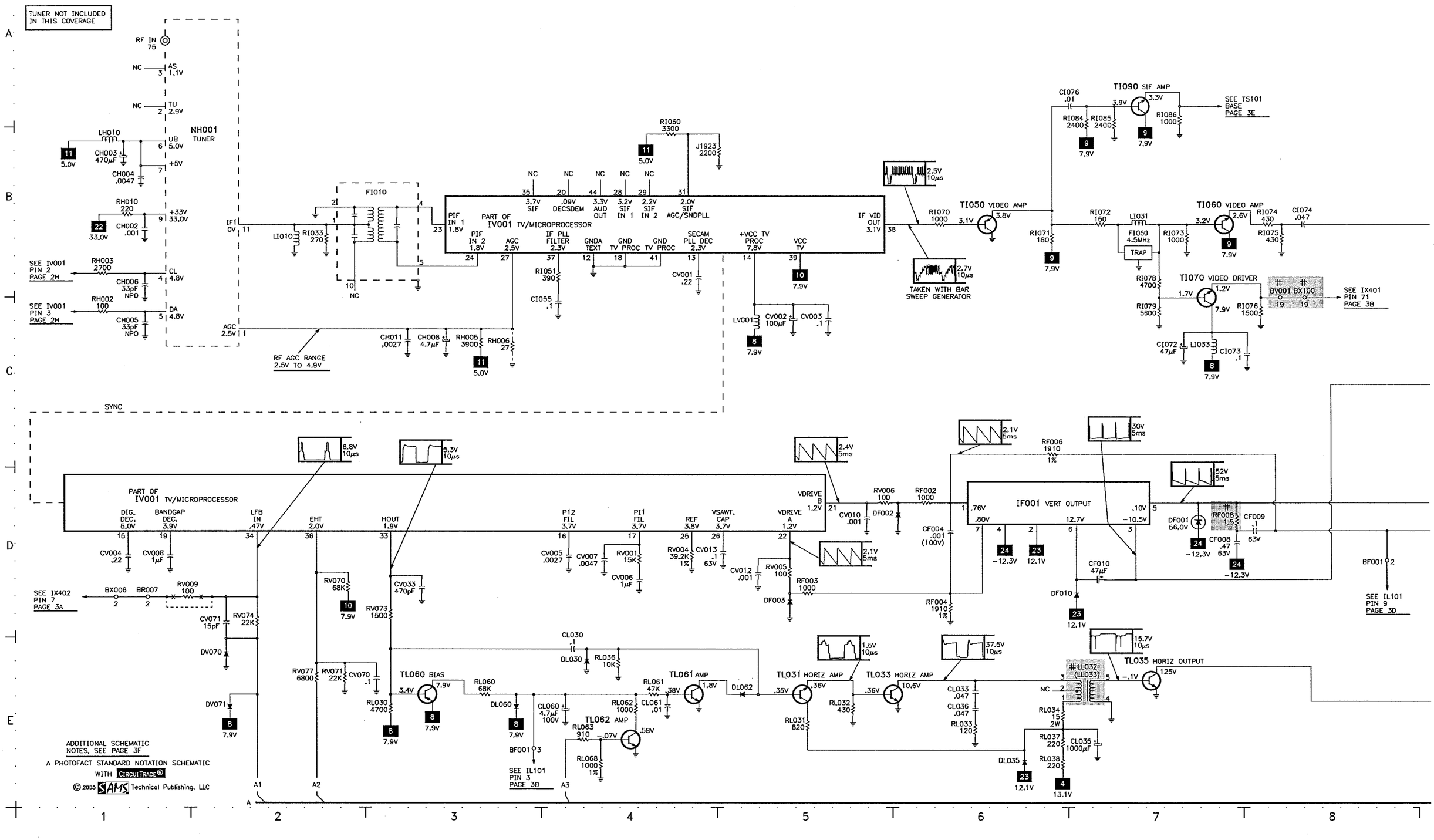
MAV BOARD - BOTTOM VIEW



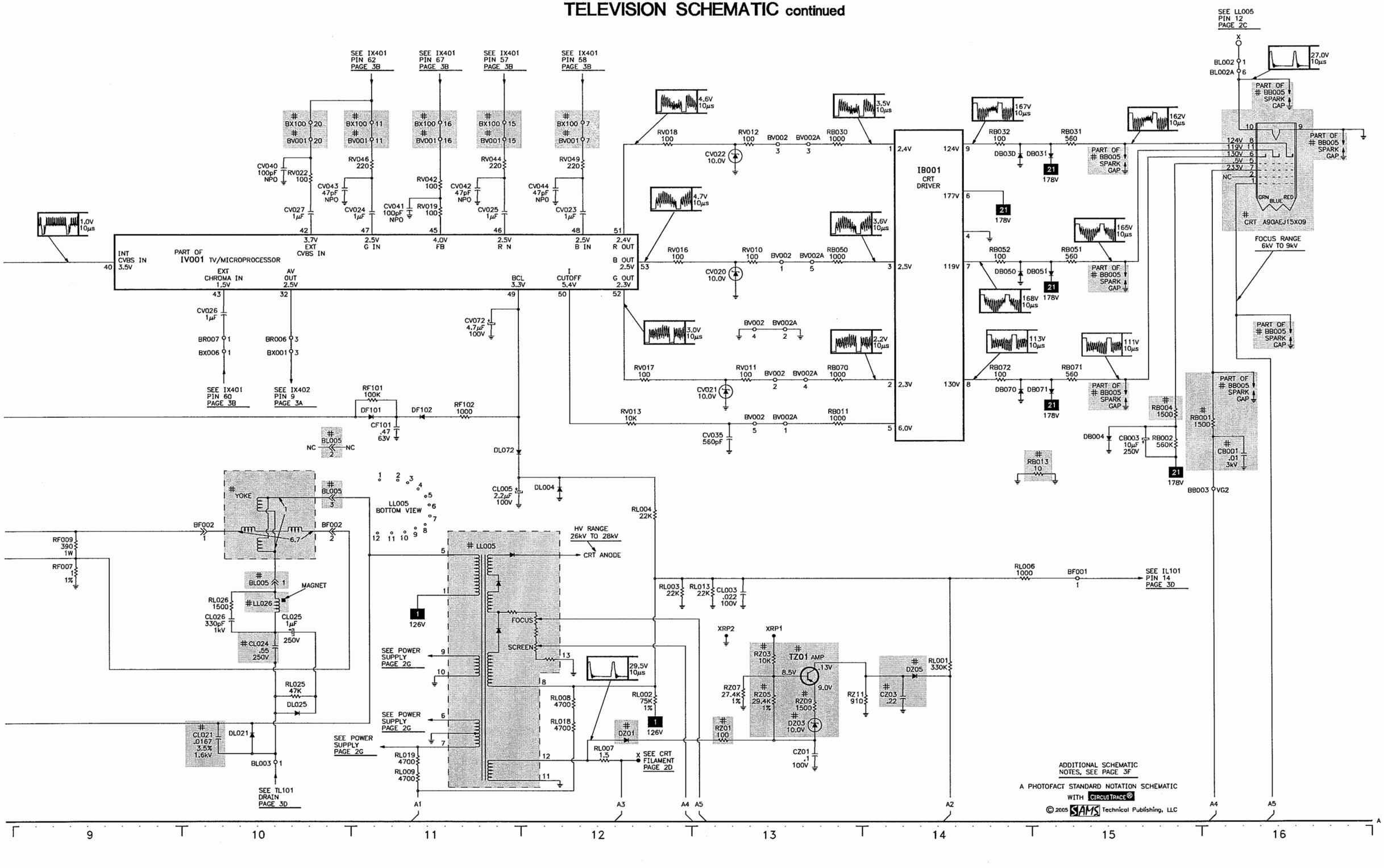
RCA

MODEL 36V430TYX1 (CHASSIS ITC008HYN)

TELEVISION SCHEMATIC



TELEVISION SCHEMATIC continued



POWER SUPPLY SCHEMATIC

E

F

△ TAKEN FROM COMMON TIE POINT

120VAC 1.2A POLARIZED

BP003 FP001 5A LP002 SP001 DEGAUSS BP002 DEGAUSS BP002 RP003 PTC RP009 470K 1W ZP001 CP002 .22 RP015 8.2M

DP004 DP005 DP003 DP002 CP006 .0015 1kV CP005 .0015 1kV CP004 .0015 1kV RP006 120K RP007 120K

10.0V△ 6ms RP001 1.6 10W CP008 680µF 200V

LP003 LP081 CP088 .0022 2kV DP080

290V 10µs 455V△ 10µs 50V 10µs 55.0V△ 10µs 17V 10µs 32V 10µs

CP009 .0022 1.6kV CP026 330pF 1kV DP025 DP026 LP025 NC

LP003 BOTTOM VIEW

LP020 BH001 WP003A CP018 .0022 250V RP016 1.8M CP015 .0022 250V CV050 .022

TP171 SWITCH .01V DP071 SP001 DEGAUSS 4 13.1V

CP024 22µF CP025 22µF DP027 27.0V RP132 22K CP123 .001 DP023 8.2V RP125 10K

TP020 DRIVER 4.0V△ 154V△ .17V△ TP025 AMP 21.8V△ 21.3V△ 12.4V△

DP040 27.0V RP040 2200 CP037 .0015 CP039 180pF N150 CP038 180pF N150 DPD37 RP037 33K CP040 10µF 63V RP041 27K RP038 470

RP023 1200 RP027 1200 RP021 22 RP029 2200 RP031 10 RP033 47K CP033 .0033 OP033 15.0V 3.6V△ 4.0V△ TP023 AMP .25V△

RP020 .33 2.5W RP028 22 RP026 2700 3.6V△ TP022 ERROR AMP

RP030 1000 DP030 8.2V

IP001 PHOTO-COUPLER 12.9V△ 10.6V .5V△

CP022 470pF N1500

RP052 2700 RP056 130K .1% RP155 6800 CP050 .0022 9.6V IP050 REF 2.5V RP054 10 RP158 2490 1%

DP057 9.1V RP057 3300 TP052 SENSE 4.2V .13V RP153 430 CP053 .01 RP150 2700 5 8.5V

4 13.1V

TP175 SWITCH .13V 3.2V RP077 2200 RP175 2200 12 3.3V

TP177 SWITCH .7V .02V TP176 SWITCH RP176 2200 12 3.3V RP078 6800

SEE IV001 PIN 63 PAGE 2H

BG407 NC 2 BP090 2 SEE IV001 PIN 1 PAGE 2H

CP166 .0022

IP030 DUAL VOLTAGE REG

VI1 VI2 OIS 2.9V DELAY 2.8V GND PROG 2.3V VO2 VO1 RESET 3.1V

CP131 1µF

FZP60 3.15A CP060 330pF 1kV DP061

FZP61 3.15A CP063 330pF 1kV DP063 CP068 330pF 1kV RP068 4.7 RP066 220

FZP93 600mA DP093 CP093 330pF 1kV

DP097 RP095 3900 DP095 5.6V RP192 3900 12 3.3V TP192 LATCH CP097 10µF 63V

TP193 LATCH -2.2V 5.2V RP197 10K -2.2V 5.0V RP199 680 RP190 10K 12 3.3V

RV021 39 RR019 120 TR005 +5V REG 7.7V 5.7V RR052 100 CR009 100µF DR001 5.6V CP198 .01 RP196 1000

RP161 3920 1% RP162 1690 1% FZP66 500mA DP036

RR030 270 BR001 BR001A NC GK02 (GK03) POWER RED LI032 CI070 .1 CI071 100µF LV004 CV029 .1 CV030 100µF

IP031 +5V REG IN 7.2V OUT GND

LR002 LR001 CR006 .1 CR005 100µF

DS201 CS205 .1 CP062 1000µF CS206 2200µF CP064 1000µF CP080 100µF 250V CP094 1000µF CR001 .1

BR007 BX006 LX502 4 4 BR006 BX001 6 6

CP036 10µF 63V CR057 .1 CP035 10µF 63V CV046 .1 CV045 .47 63V

1 126V SOURCE
2 21.0V SOURCE
3 20.3V SOURCE
4 13.1V SOURCE
5 8.5V SOURCE
6 5.0V SOURCE
20 5.0V SOURCE
7A 7.9V SOURCE
8 7.9V SOURCE
9 7.9V SOURCE
10 7.9V SOURCE
11 5.0V SOURCE
12 3.3V SOURCE
13 3.3V SOURCE
14 3.3V SOURCE

SEE TS201 BASE PAGE 3E

SEE TX506 BASE PAGE 3C

SEE TR002 BASE PAGE 2H

ADDITIONAL SCHEMATIC NOTES, SEE PAGE 3F

A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE®

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G
POWER SUPPLY SCHEMATIC continued

BP090 BG407 NC — NC
BP090 BG407
BP090 BG407
FZX001 500mA
TX508 +12V REG
RX553 3900
RX605 10K
RX604 10K
RX554 10K
CX532 .01
TX502 SWITCH
RX600 10
RX510 10
15 12.4V SOURCE
16 12.4V SOURCE
DX504 3.9V
RX535 330Ω
RX555 10K
BR007 BX006
BR007 BX006
7B 7.9V SOURCE
19 5.5V SOURCE
TX501 REG
RX512 120
RX511 100
DX503 5.6V
CX001 47µF
CC102 .1
CC101 100µF
BV001 BX100
NC BV001 BX100
ADDITIONAL SCHEMATIC NOTES, SEE PAGE 3F
A PHOTOFACT STANDARD NOTATION SCHEMATIC WITH CIRCUITRACE®
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BL002 BL002A
NC BL002 BL002A NC
SEE LL005 PAGE 2C
PART OF LL005
258V 10µs
CL040 330pF 1kV DL040
RL040 47
LL040
CL041 10µF 250V
21 178V SOURCE
RL041 8200 RL042 8200 RL043 8200 RL044 8200
CB004 .047 250V
CB006 10µF 250V
22 33.0V SOURCE
DH001 33.0V
CH001 .047
BR007 BX006 NC
1 126V
125V 10µs
CL012 330pF 1kV DL012
RL012 22
23 12.1V SOURCE
DL013
CL013 1000µF
CL010 330pF 1kV DL010
RL010 1
CF005 .22 63V
24 -12.3V SOURCE
DL011
CF003 .22 63V
CL011 220µF
127V 10µs
BL003 BL103
CL102 330pF 1kV DL101
RL101 18
25 12.2V SOURCE
RL102 4700
DL103
CL101 100µF
26 -10.8V SOURCE
RL103 6800
CL103 100µF
BL003 BL103

H
SYSTEM CONTROL SCHEMATIC

GK001 REMOTE RECEIVER
OUT 5.0V
GND
VS 5.0V
BR001A BR001
RR008 39K
RR007 10K
14 3.3V
DK003 5.6V
DK005 5.6V
SGK07 SPARK GAP
CK002 47µF
RK106 220
DK004 5.6V
DK006 5.6V
SGK06 SPARK GAP
CK001 .01
BR001A
BR001
6 5.0V
LV002
LV003
CV018 100µF
CV019 .1
13 3.3V
SK101 CH –
SK102 CH +
SK103 VOL –
SK104 VOL +
SK105 MENU
SK106 POWER
RK102 180
RK103 330
RK104 430
SGK02 SPARK GAP
SGK03 SPARK GAP
SGK04 SPARK GAP
SGK05 SPARK GAP
SGK08 SPARK GAP
SK01 SPARK GAP
RK105 180
RK006 1200
RR013 3300
RK001 1200
CR007 .001
12 3.3V
RR044 47K
RR043 470K
CR008 470pF
CR071 47µF
RR012 3300
CR011 .001
RK105 180
RK006 1200
12 3.3V
14 3.3V
QV001 12MHz
CV015 15pF
CV014 15pF
TR002 RESET SWITCH
SEE IP030 PIN 6 PAGE 2F
3.1V
.02V
RR027 100
CR010 .1
RR009 3900
14 3.3V
IR 3.7V
PART OF IV001 TV/MICRPROCESSOR
VCCD CORE 3.2V
VCCA TXT 3.2V
KEYB/ LED 3.2V
GND
SLOW START 3.2V
NC READY .05V
KEYA 3.2V
+VDD
XTAL IN 1.6V
XTAL OUT 1.6V
OSC GND .03V
RESET .1V
GND
OTP PROG V
TUNER NOT INCLUDED IN THIS COVERAGE
SDA 4.8V
RR004 2700
SCL 4.8V
RR003 2700
WC WRITE 5.0V
RR011 100
RRD22 4700
4.8V SCLK 4.8V SDA
WC 5.0V
IR001 EEPROM
PRE E1 E2 VSS +VCC
AUDIO MUTE 0V
CR033 .0022
SEE TS204 BASE PAGE 3F
PIF 0V
CI058 4700
IR DVD 5.2V
RRD60 100
BURST .13V
PO 3.2V
RR006 1000
RR005 10K
CR004 100pF NPO
RR001 100
CR002 100pF NPO
RR020 220
CR024 100pF NPO
RR002 100
CR003 100pF NPO
RR021 220
CR021 100pF NPO
DX541 5.6V
DX542 5.6V
SEE IS100 PIN 8 PAGE 3E
SEE TUNER NH001 PIN 5 PAGE 2A
SEE IC101 PIN 15 PAGE 3G
SEE IX401 PIN 43 PAGE 3A
SEE IC101 PIN 14 PAGE 3G
SEE IS100 PIN 7 PAGE 3E
SEE TUNER NH001 PIN 4 PAGE 2A
SEE IX401 PIN 42 PAGE 3A
SEE IS100 PIN 20 PAGE 3E
SEE IX401 PIN 33 PAGE 3C
SEE TP175 BASE PAGE 2E
SEE TP177 BASE PAGE 2E
ADDITIONAL SCHEMATIC NOTES, SEE PAGE 3F
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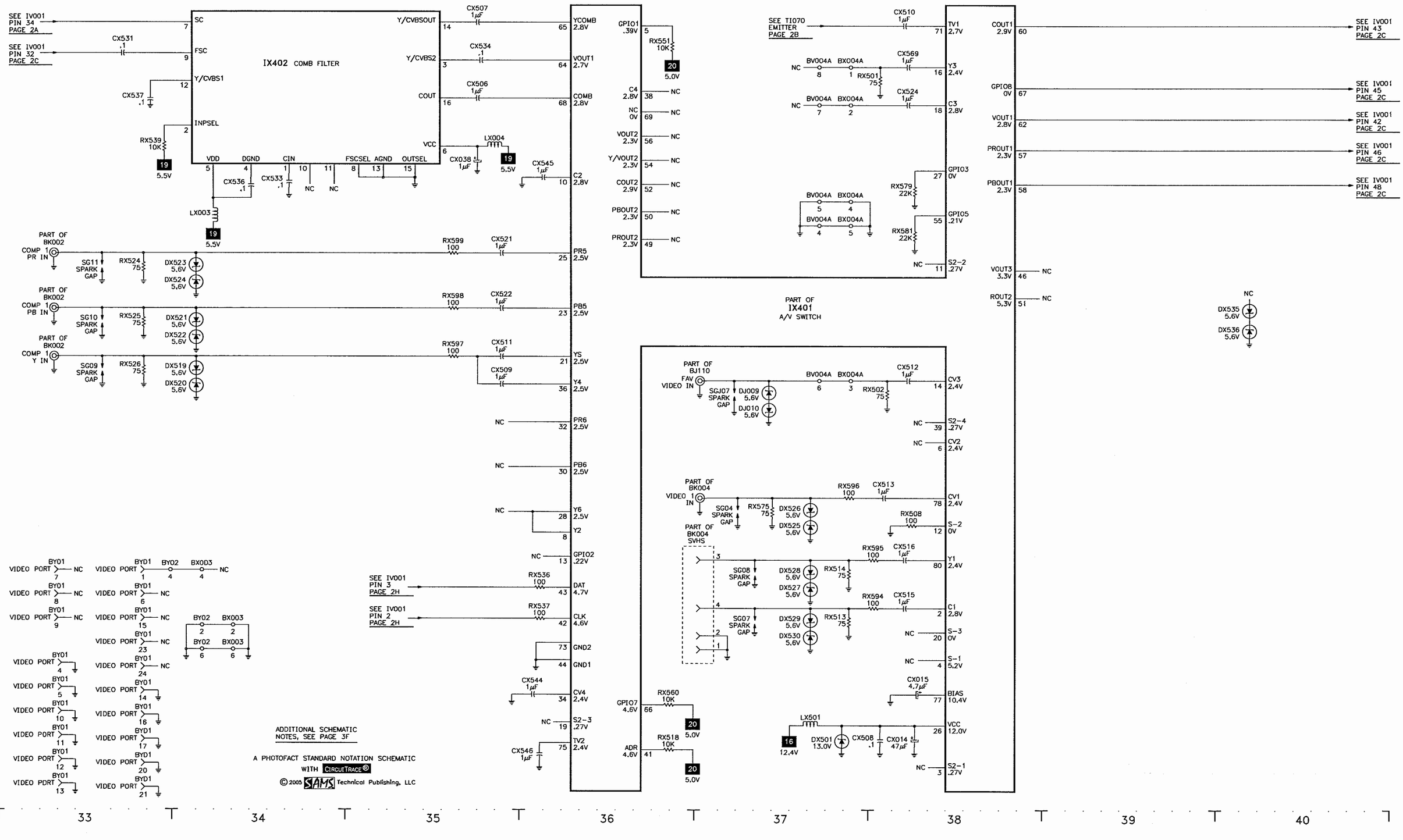
RCA MODEL 36V430TYX1 (CHASSIS ITC008HYN)

MAV SCHEMATIC



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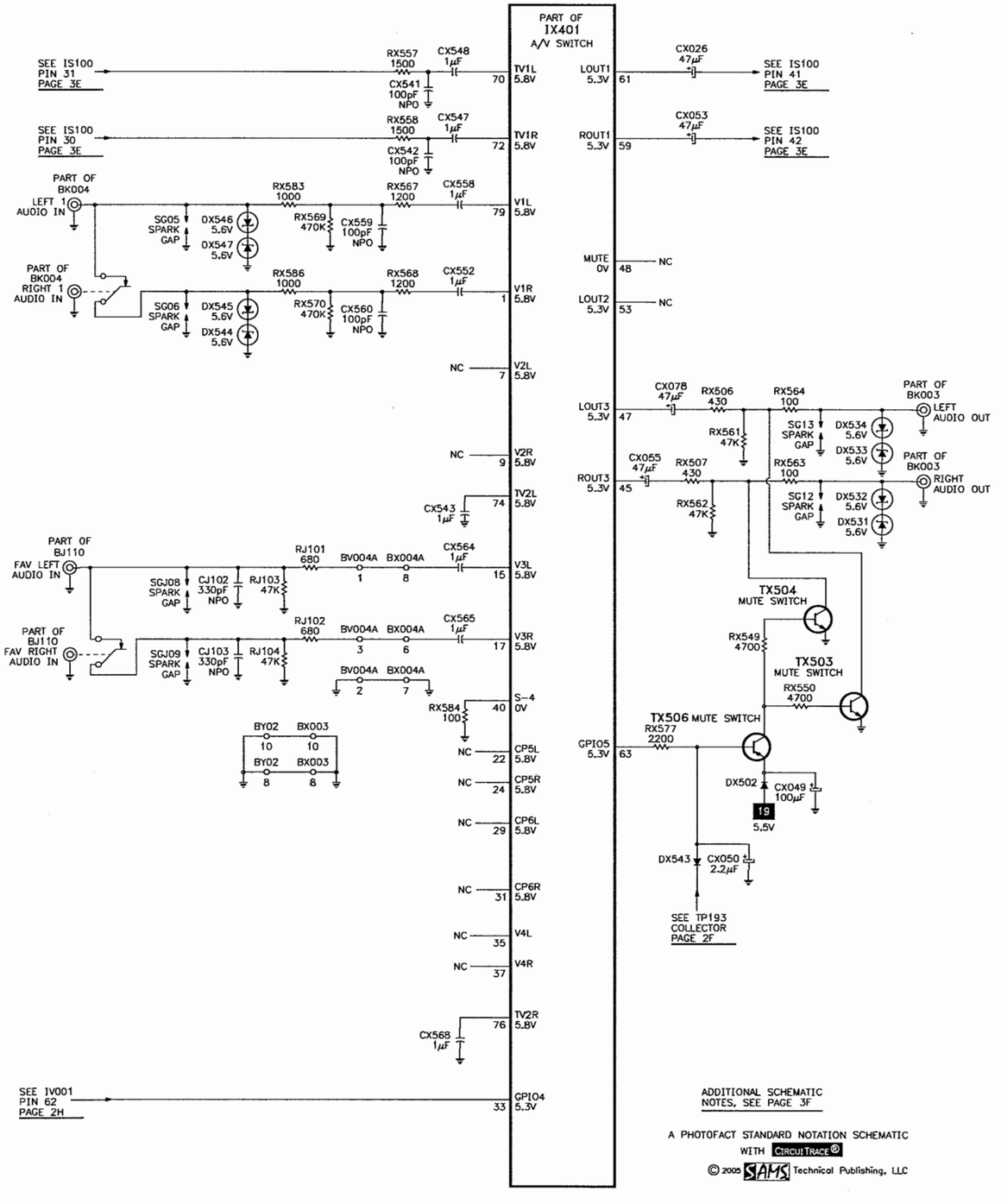
MAV SCHEMATIC continued



ADDITIONAL SCHEMATIC NOTES, SEE PAGE 3F

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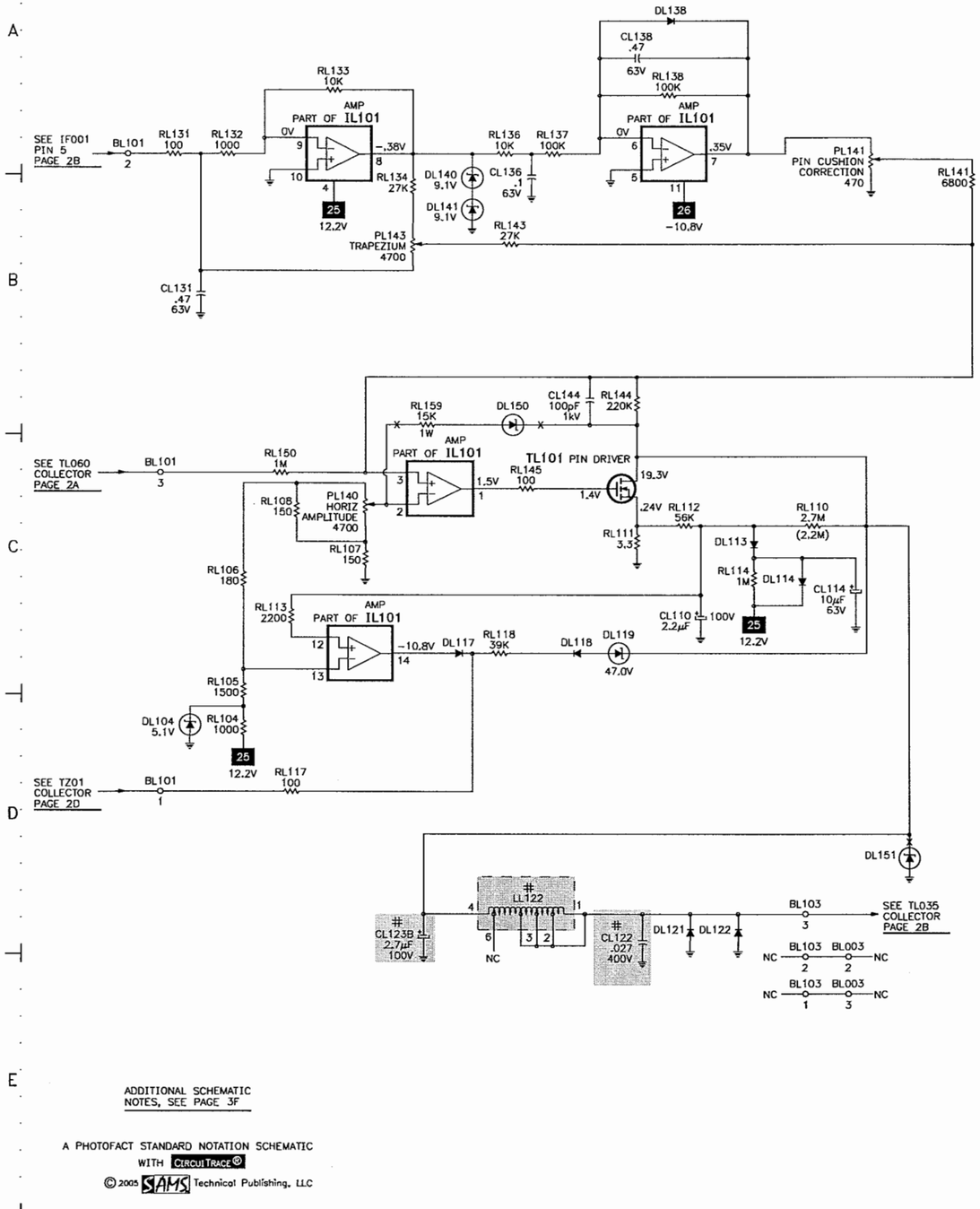
D
PIN CUSHION SCHEMATIC



ADDITIONAL SCHEMATIC NOTES, SEE PAGE 3F

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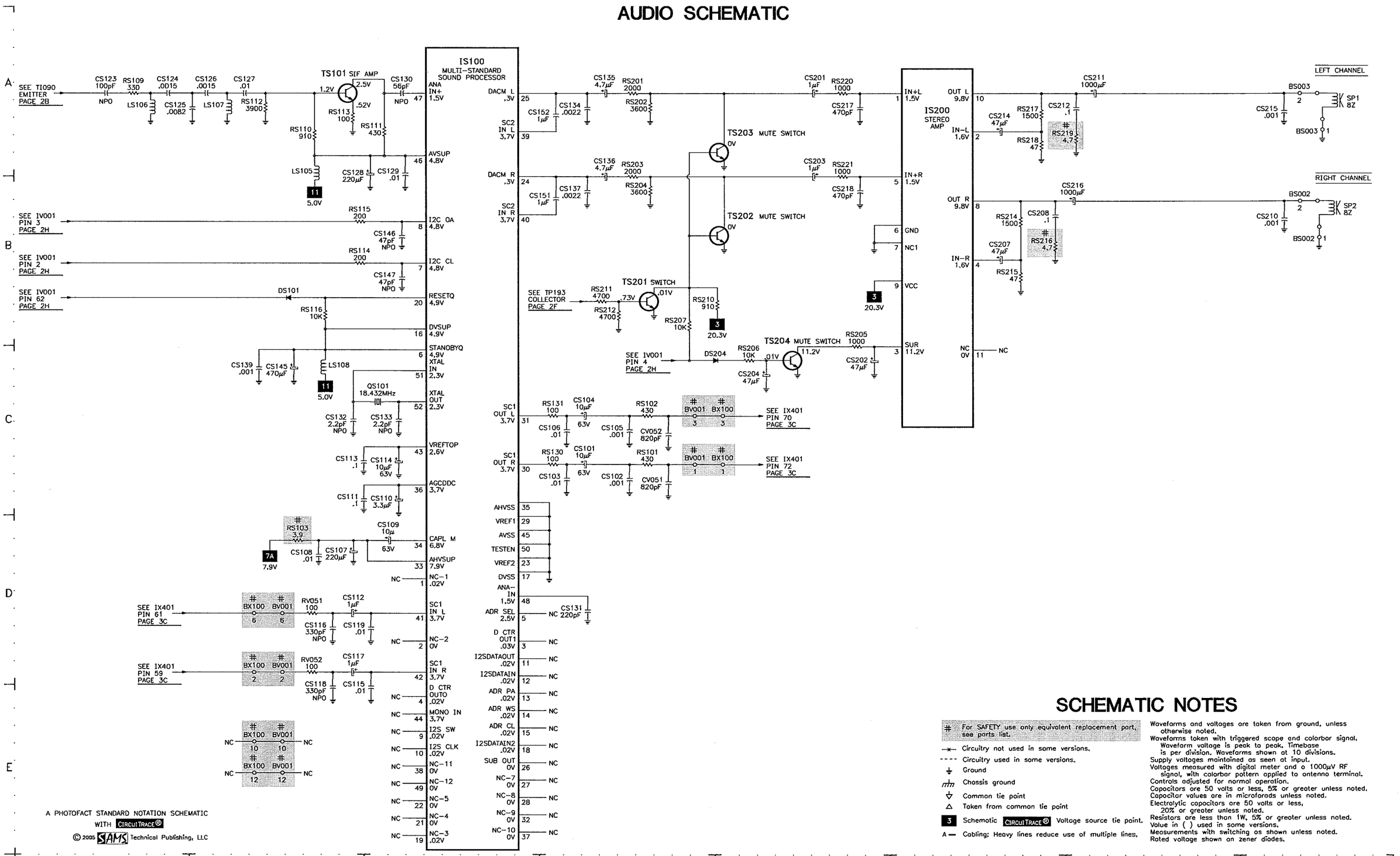
AUDIO SCHEMATIC



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SCHEMATIC NOTES

For SAFETY use only equivalent replacement part, see parts list.

—x— Circuitry not used in some versions.

- - - - Circuitry used in some versions.

⏚ Ground

Chassis ground

Common tie point

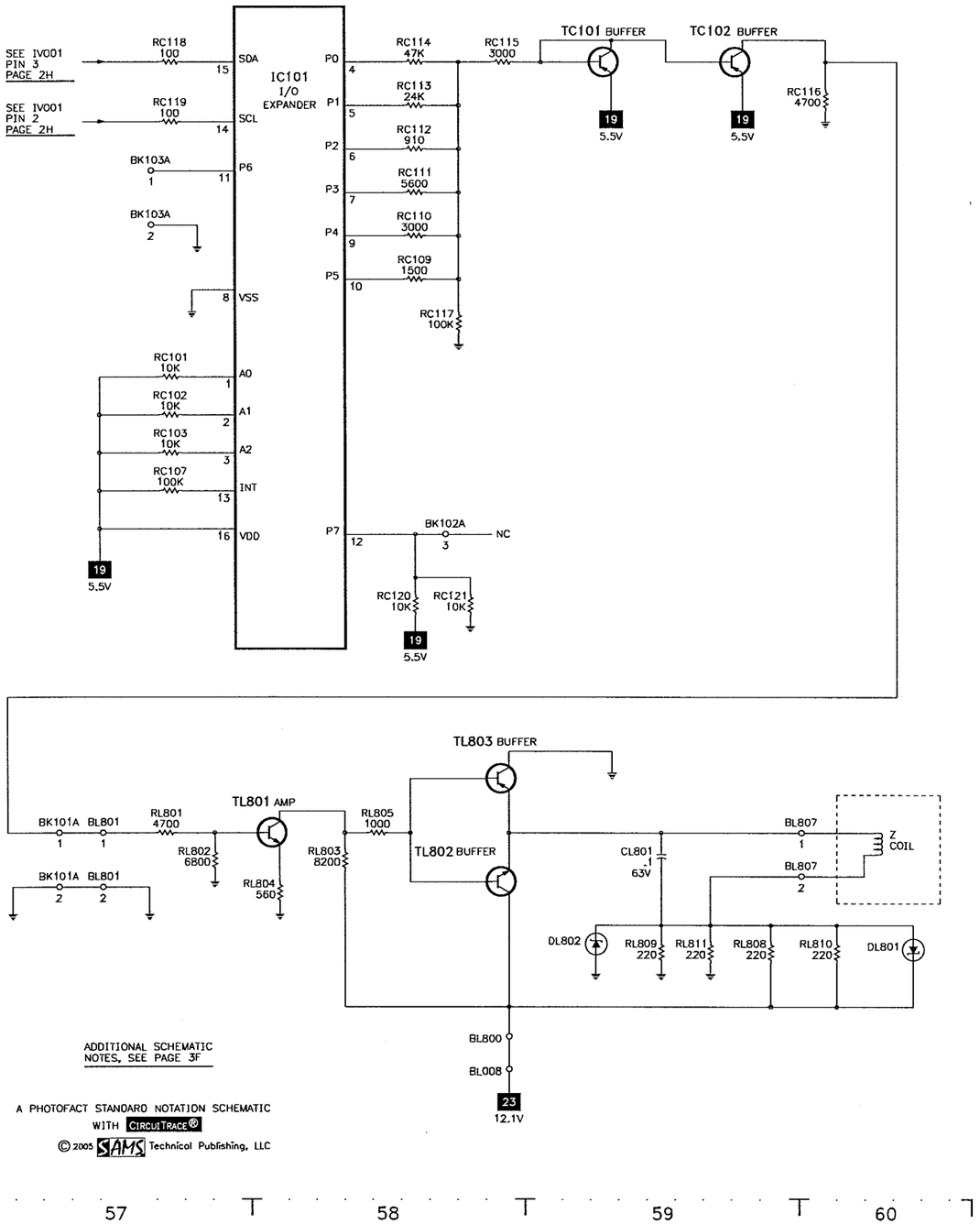
△ Taken from common tie point

3 Schematic CIRCUITRACE® Voltage source tie point.

A— Cabling; Heavy lines reduce use of multiple lines,

Waveforms and voltages are taken from ground, unless otherwise noted.
Waveforms taken with triggered scope and colorbar signal. Waveform voltage is peak to peak. Timebase is per division. Waveforms shown at 10 divisions.
Supply voltages maintained as seen at input.
Voltages measured with digital meter and a 1000μV RF signal, with colorbar pattern applied to antenna terminal.
Controls adjusted for normal operation.
Capacitors are 50 volts or less, 5% or greater unless noted.
Capacitor values are in microfarads unless noted.
Electrolytic capacitors are 50 volts or less, 20% or greater unless noted.
Resistors are less than 1W, 5% or greater unless noted.
Value in ( ) used in some versions.
Measurements with switching as shown unless noted.
Rated voltage shown on zener diodes.

G
Z COIL SCHEMATIC



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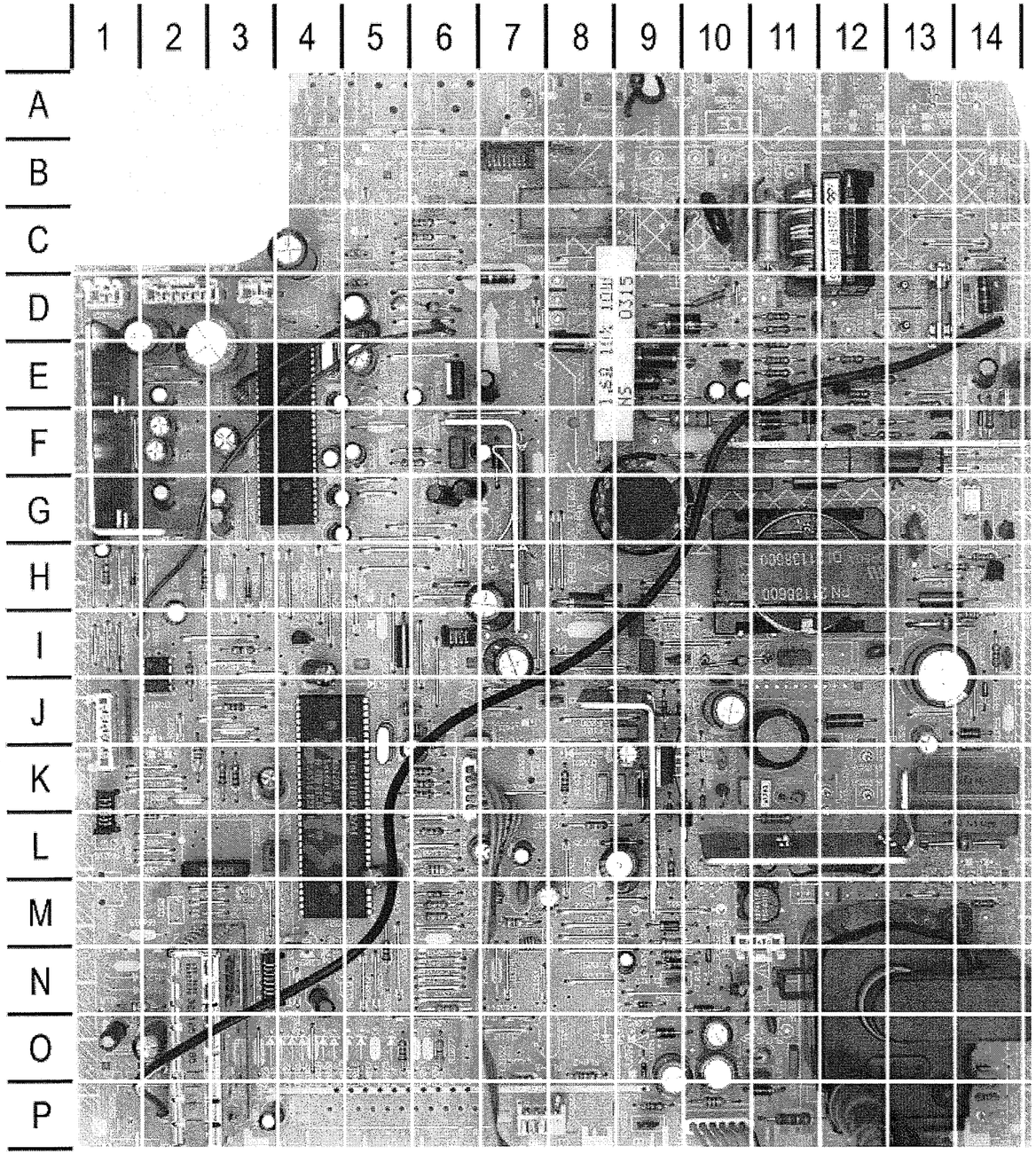
SCHEMATIC COMPONENT LOCATION GUIDE

BJ110	C37	CP097	C22	CV040	B10	DL140	B46	LL032	E6	RL007	E12	RP175	D17	RX550	D43
BJ110	C41	CP123	B20	CV041	B11	DL141	B46	LL040	D26	RL008	E12	RP176	D17	RX551	A36
BJ110	C41	CP131	E22	CV042	B11	DL150	C46	LL122	D46	RL009	E11	RP190	C23	RX553	A27
BK002	B33	CP166	E22	CV043	B10	DL151	D48	LP002	A17	RL010	E26	RP192	C22	RX554	A27
BK002	C33	CP198	C23	CV044	B12	DL801	E60	LP003	A20	RL012	D26	RP196	C23	RX555	B27
BK002	C33	CR001	B24	CV045	E24	DL802	E59	LP020	B18	RL013	D13	RP197	C22	RX557	A42
BK003	B44	CR002	A32	CV046	E24	DP002	A19	LP025	B20	RL018	E12	RP199	C23	RX558	A42
BK003	C44	CR003	B32	CV050	B19	DP003	A19	LP081	A21	RL019	E11	RR001	A31	RX560	E36
BK004	B41	CR004	E31	CV051	C52	DP004	A19	LR001	E24	RL025	E10	RR002	B31	RX561	C43
BK004	B41	CR005	E24	CV052	C52	DP005	A19	LR002	E23	RL026	D10	RR003	B31	RX562	C43
BK004	D37	CR006	E24	CV070	E3	DP023	B19	LS105	B50	RL030	E3	RR004	A31	RX563	C43
CB001	C16	CR007	B30	CV071	D2	DP025	B20	LS106	A49	RL031	E5	RR005	E31	RX564	B43
CB003	C15	CR008	C50	CV072	C11	DP026	B20	LS107	A50	RL032	E5	RR006	E31	RX567	B42
CB004	D28	CR009	C23	CX001	B27	DP027	B19	LS108	C50	RL033	E6	RR007	A30	RX568	B42
CB006	D28	CR010	D30	CX014	E38	DP030	C20	LV001	C5	RL034	E6	RR008	A30	RX569	B42
CC101	B28	CR011	C30	CX015	E38	DP033	C18	LV002	A30	RL036	E4	RR009	D30	RX570	B42
CC102	B27	CR021	C32	CX026	A43	DP036	D23	LV003	B30	RL037	E6	RR011	C31	RX575	D37
CF003	E28	CR024	A32	CX038	B35	DP037	C19	LV004	D24	RL038	E6	RR012	C30	RX577	D43
CF004	D6	CR033	D31	CX049	D44	DP040	C20	LX003	B34	RL040	D26	RR013	B30	RX579	B38
CF005	D27	CR057	D24	CX050	D43	DP057	D22	LX004	B35	RL041	D27	RR019	C23	RX581	B38
CF008	D7	CR071	C30	CX506	A35	DP061	A22	LX501	E37	RL042	D27	RR020	A32	RX583	B42
CF009	D7	CRT	B16	CX507	A35	DP063	B22	LX502	C24	RL043	D27	RR021	C32	RX584	D42
CF010	D7	CS101	C52	CX508	E38	DP071	B17	NH001	B2	RL044	D27	RR022	C31	RX586	B42
CF101	C11	CS102	C52	CX509	C35	DP080	A21	PL140	C46	RL060	E3	RR027	D30	RX594	D37
CH001	D28	CS103	C52	CX510	A38	DP093	B22	PL141	B48	RL061	E4	RR030	D23	RX595	D37
CH002	B1	CS104	C52	CX511	C35	DP095	C22	PL143	B46	RL062	E4	RR043	C30	RX596	D37
CH003	B1	CS105	C52	CX512	C38	DP097	C22	QS101	C51	RL063	E4	RR044	B30	RX597	C35
CH004	B1	CS106	C52	CX513	D37	DR001	C23	QV001	C30	RL068	E4	RR052	C23	RX598	C35
CH005	C1	CS107	D50	CX515	D38	DS101	B50	RB001	C16	RL101	E26	RR060	E31	RX599	B35
CH006	C1	CS108	D50	CX516	D38	DS201	B24	RB002	C15	RL102	E26	RS101	C52	RX600	A27
CH008	C3	CS109	D51	CX521	B35	DS204	C52	RB004	C15	RL103	E28	RS102	C52	RX604	A27
CH011	C3	CS110	C51	CX522	C35	DV070	E2	RB011	C13	RL104	D45	RS103	D50	RX605	A26
CI055	C4	CS111	C50	CX524	A38	DV071	E2	RB013	C14	RL105	D45	RS109	A49	RZ01	E13
CI058	D31	CS112	D50	CX053	A43	DX501	E37	RB030	B13	RL106	C45	RS110	A50	RZ03	E13
CI070	D24	CS113	C50	CX531	A33	DX502	D43	RB031	B15	RL107	C46	RS111	A51	RZ05	E13
CI071	D24	CS114	C51	CX532	A27	DX503	B27	RB032	B14	RL108	C46	RS112	A50	RZ07	E13
CI072	C7	CS115	E51	CX533	B34	DX504	B26	RB050	B13	RL110	C47	RS113	A50	RZ09	E13
CI073	C7	CS116	D50	CX534	A35	DX519	C34	RB051	B15	RL111	C47	RS114	B50	RZ11	E13
CI074	B8	CS117	D50	CX536	B34	DX520	C34	RB052	B14	RL112	C47	RS115	B50	SK101	B29
CI076	B6	CS118	E50	CX537	A33	DX521	C34	RB070	C13	RL113	C45	RS116	B50	SK102	B29
CJ102	C41	CS119	D51	CX541	A42	DX522	C34	RB071	C15	RL114	C47	RS130	C51	SK103	B29
CJ103	C41	CS123	A49	CX542	A42	DX523	B34	RB072	C14	RL117	D45	RS131	C51	SK104	C29
CK001	B30	CS124	A49	CX543	C42	DX524	B34	RC101	C57	RL118	C46	RS201	A52	SK105	C29
CK002	A29	CS125	A50	CX544	E35	DX525	D37	RC102	C57	RL131	B45	RS202	A52	SK106	C29
CL003	D13	CS126	A50	CX545	B36	DX526	D37	RC103	C57	RL132	B45	RS203	B52	SP001	A18
CL005	D11	CS127	A50	CX546	E36	DX527	D37	RC107	C57	RL133	A46	RS204	B52	SP001	B18
CL010	E26	CS128	B51	CX547	A42	DX528	D37	RC109	B58	RL134	B46	RS205	C53	SP1	A56
CL011	E28	CS129	B51	CX548	A42	DX529	D37	RC110	B58	RL136	B46	RS206	C53	SP2	B56
CL012	D26	CS130	A51	CX055	C43	DX530	E37	RC111	B58	RL137	B46	RS207	B52	TC101	A59
CL013	D28	CS131	D52	CX552	B42	DX531	C44	RC112	B58	RL138	A47	RS210	B52	TC102	A59
CL021	E10	CS132	C50	CX558	B42	DX532	C44	RC113	B58	RL141	B48	RS211	B52	T1050	B6
CL024	D10	CS133	C51	CX559	B42	DX533	C44	RC114	A58	RL143	B46	RS212	B52	T1060	B7
CL025	D10	CS134	A52	CX560	B42	DX534	B44	RC115	A58	RL144	B47	RS214	B54	T1070	C7
CL026	D10	CS135	A52	CX564	C42	DX535	C40	RC116	A60	RL145	C46	RS215	B54	T1090	B7
CL030	E4	CS136	B52	CX565	C42	DX536	C40	RC117	B58	RL150	C45	RS216	B54	TL031	E5
CL033	E6	CS137	B52	CX568	E42	DX541	B31	RC118	A57	RL159	C46	RS217	A54	TL033	E5
CL035	E7	CS139	C50	CX569	A38	DX542	C31	RC119	B57	RL801	D57	RS218	A54	TL035	E7
CL036	E6	CS145	C50	CX078	B43	DX543	D43	RC120	C58	RL802	D57	RS219	A55	TL060	E3
CL040	D26	CS146	B51	CZ01	E13	DX544	B41	RC121	C58	RL803	D58	RS220	A53	TL061	E4
CL041	D26	CS147	B51	CZ03	E14	DX545	B41	RF IN	A1	RL804	D58	RS221	B53	TL062	E4
CL060	E4	CS151	B52	DB004	C15	DX546	B41	RF002	D6	RL805	D58	RV001	D4	TL101	C47
CL061	E4	CS152	A52	DB030	B14	DX547	B41	RF003	D5	RL808	E59	RV004	D4	TL801	D58
CL101	E28	CS201	A53	DB031	B15	DZ01	E12	RF004	D6	RL809	E59	RV005	D5	TL802	D58
CL102	E27	CS202	C53	DB050	B14	DZ03	E13	RF006	D6	RL810	E60	RV006	D5	TL803	D58
CL103	E28	CS203	B53	DB051	B15	DZ05	E14	RF007	D9	RL811	E59	RV009	D1	TP020	C18
CL110	C47	CS204	C53	DB070	C14	FI010	B2	RF008	D7	RP001	A20	RV010	B13	TP022	D19
CL114	C48	CS205	B24	DB071	C15	FI050	B7	RF009	D9	RP003	A18	RV011	C13	TP023	C19
CL122	D47	CS206	B24	DEGAUSS	A18	FP001	A17	RF101	C11	RP006	A20	RV012	B13	TP025	B19
CL123B	D46	CS207	B54	DF001	D7	FZP60	A21	RF102	C11	RP007	A20	RV013	C12	TP052	D21
CL131	B45	CS208	B54	DF002	D5	FZP61	B22	RH002	C1	RP009	A18	RV016	B12	TP171	B17
CL136	B46	CS210	B56	DF003	D5	FZP66	D23	RH003	B1	RP015	B18	RV017	C12	TP175	D17
CL138	A47	CS211	A55	DF010	D6	FZP93	B21	RH005	C3	RP016	B19	RV018	B12	TP176	D18
CL144	B47	CS212	A55	DF101	C11	FZX001	A26	RH006	C3	RP020	C18	RV019	B11	TP177	D17
CL801	D59	CS214	A54	DF102	C11	GK001	A29	RH010	B1	RP021	C18	RV021	B23	TP192	C22
CP002	A18	CS215	A56	DH001	D28	GK02	D23	RI033	B2	RP023	C19	RV022	B10	TP193	C22
CP004	A19	CS216	B54	DJ009	C37	IB001	B14	RI051	B4	RP026	C19	RV042	B11	TR002	D29
CP005	A19	CS217	A53	DJ010	C37	IC101	A58	RI060	B4	RP027	C19	RV044	B11	TR005	C23
CP006	A19	CS218	B53	DK003	A29	IF001	D6	RI070	B6	RP028	C19	RV046	B11	TS101	A50
CP008	A20	CV001	B4	DK004	A29	IL101	B46	RI071	B6	RP029	C19	RV049	B12	TS201	B52
CP009	B20	CV002	C5	DK005	A29	IL101	B47	RI072	B7	RP030	C20	RV051	D50	TS202	B52
CP015	B19	CV003	C5	DK006	B29	IL101	C46	RI073	B7	RP031	C18	RV052	D50	TS203	B52
CP018	B19	CV004	D1	DL004	D12	IL101	C46	RI074	B8	RP033	C18	RV070	D2	TS204	C53
CP022	D20	CV005	D4	DL010	E26	IP001	C20	RI075	B8	RP037	C20	RV071	E2	TX501	B27
CP024	B18	CV006	D4	DL011	E27	IP030	D22	RI076	C8	RP038	C20	RV073	D3	TX502	B27
CP025	B19	CV007	D4	DL012	D26	IP031	E23	RI078	C7	RP040	C20	RV074	D2	TX503	D44
CP026	B20	CV008	D1	DL013	D28	IP050	D21	RI079	C7	RP041	C20	RV077	E2	TX504	C44
CP033	C18	CV010	D5	DL021	E10	IR001	C31	RI084	B7	RP052	C21	RX501	A38	TX506	D43
CP035	E24	CV012	D5	DL025	E10	IS100	A51	RI085	B7	RP054	D21	RX502	C38	TX508	A27
CP036	D24	CV013	D4	DL030	E4	IS200	A54	RI086	B7	RP056	C21	RX506	B43	TZ01	E13
CP037	C20	CV014	D30	DL035	E6	IV001	A30	RJ101	C42	RP057	D21	RX507	C43	XRP1	D13
CP038	C20	CV015	D30	DL040	D26	IV001	B3	RJ102	C42	RP066	B22	RX508	D38	XRP2	D13
CP039	C20	CV018	B30	DL060	E3	IV001	B9	RJ103	C42	RP068	B22	RX510	A27	ZP001	A18
CP040	C20	CV019	B30	DL062	E5	IV001	D1	RJ104	C42	RP077	D17	RX511	B27		
CP050	D21	CV020	B13	DL072	C11	IX401	A43	RK001	B30	RP078	D17	RX512	B27		
CP053	D21	CV021	C13	DL101	E27	IX401	C37	RK006	C30	RP095	C22	RX513	D37		
CP060	A22	CV022	B13	DL103	E27	IX402	A34	RK102	B29	RP125	B20	RX514	D37		
CP062	B24	CV023	B12	DL104	D45	J1923	B4	RK103	B29	RP132	B19	RX518	E36		
CP063	B22	CV024	B11	DL113	C47	LH010	B1	RK104	B29	RP150	D21	RX524	B33		
CP064	B24	CV025	B11	DL114	C47	LI010	B2	RK105	C29	RP151	D22	RX525	C33		
CP066	E24	CV026	B10	DL117	C46	LI031	B7	RK106	A29	RP153	C21	RX526	C33		
CP068	B22	CV027	B10	DL118	C47	LI032	D24	RL001	E14	RP155	C21	RX535	B26		
CP080	A24	CV029	D24	DL119	C47	LI033	C7	RL002	E12	RP158	D21	RX536	D36		
CP088	A21	CV030	D24	DL121	D47	LL005	D11	RL003	D12	RP161	D23	RX537	D36		
CP093	B21	CV033	D3	DL122	D47	LL005	D25	RL004	D12	RP162	D23	RX539	B33		
CP094	B24	CV035	C13	DL138	A47	LL026	D10	RL006	D14	RP166	E23	RX549	C43		

RCA MODEL 36V430TYX1 (CHASSIS ITC008HYN)

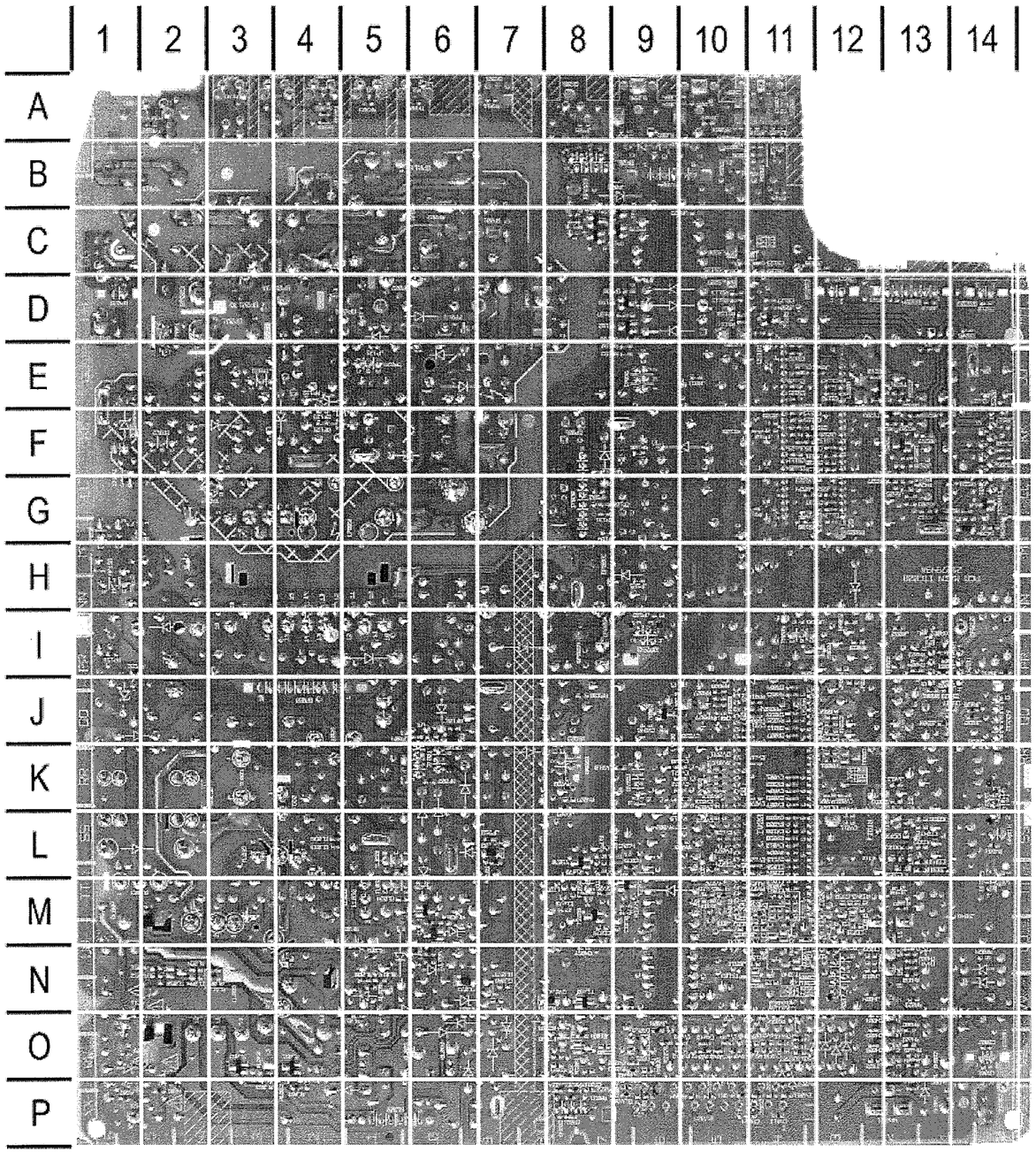
MAIN BOARD - TOP VIEW



MAIN BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

BF001	M10	CL041	O10	CS109	G4	DL035	L9	IP001	G14	RL002	M14	RP057	I14
BF002	K12	CL060	L11	CS110	F4	DL040	P11	IP030	F7	RL004	N9	RP066	J8
BL002	P10	CP002	C10	CS112	F5	DL060	M9	IP031	E6	RL007	P11	RP068	J9
BL003	M14	CP004	E9	CS114	E4	DL062	N10	IP050	G14	RL010	O11	RP077	C6
BL005	K12	CP005	M9	CS117	E6	DL072	N6	IR001	I2	RL012	N10	RP078	C6
BP002	D10	CP006	E8	CS128	D5	DP002	D10	IS100	E3	RL025	K14	RP095	F6
BP003	D13	CP008	G9	CS135	G3	DP003	E9	IS200	F1	RL026	J12	RR011	J3
BP090	I6	CP009	G10	CS136	G3	DP004	E9	IV001	J4	RL031	L9	RR030	I2
BR001	B7	CP015	G13	CS145	F3	DP005	E8	LH010	N1	RL033	L11	RS103	E5
BR002	P7	CP018	D14	CS201	E2	DP023	E11	LI031	M7	RL037	L8	RS114	H1
BR004	K1	CP022	F13	CS202	E1	DP025	F11	LI032	M7	RL038	K8	RS115	H2
BR006	L1	CP024	E10	CS203	G2	DP026	F11	LI033	M7	RL040	O11	RS214	G2
BR007	N3	CP025	E10	CS204	H1	DP027	F10	LL005	N13	RL041	P9	RS216	E1
BS002	D1	CP026	F11	CS206	E3	DP030	F14	LL026	J11	RL042	O8	RS219	D4
BS002	D3	CP033	F12	CS207	F2	DP033	F13	LL032	M11	RL043	O7	RV005	K3
BS004	D2	CP035	F7	CS211	D1	DP036	F7	LL040	P10	RL044	N6	RV006	K3
BV001	P4	CP036	G6	CS214	F2	DP037	E10	LP002	C12	RP001	E8	RV009	N5
BV002	K6	CP037	E11	CS216	C4	DP040	F12	LP003	H11	RP003	C9	RV010	K6
CF003	K8	CP038	D11	CV002	K3	DP057	J14	LP020	G11	RP006	E9	RV011	K6
CF005	K9	CP039	E11	CV013	L3	DP061	I10	LP025	F11	RP007	E9	RV012	K6
CF008	K10	CP040	E14	CV018	K5	DP063	H8	LP081	H13	RP009	L11	RV021	I3
CF009	K11	CP050	G14	CV030	L5	DP071	B6	LR001	J5	RP015	D7	RV022	L6
CF010	K9	CP053	I14	CV045	J6	DP080	I13	LR002	I5	RP016	D14	RV046	O5
CF101	J9	CP060	J10	CV050	P9	DP093	I8	LS105	D5	RP020	F10	RV073	M6
CH003	O2	CP062	J10	CV072	L7	DP095	G6	LS106	C5	RP021	E12	RV077	M6
CH008	P3	CP063	H8	CZ01	P14	DP097	H6	LS107	D5	RP023	E11	RZ05	P14
CI071	L7	CP064	H7	DF001	L10	DR001	H3	LS108	E3	RP026	E12	RZ07	P14
CI072	M7	CP066	E7	DF002	K9	DS101	H1	LV001	K2	RP027	E11	SP001	C8
CL003	O11	CP068	I9	DF003	J9	DS201	D6	LV002	J6	RP028	E12	TL033	L10
CL005	N9	CP080	I13	DF010	K9	DV071	M6	LV003	K6	RP029	E12	TL035	L12
CL010	O11	CP088	I12	DF102	L7	DZ03	O14	LV004	L6	RP030	E11	TP020	F13
CL011	O11	CP093	J8	DH001	N2	DZ05	O9	NH001	P2	RP031	E12	TP022	F13
CL012	N9	CP094	I7	DL004	N9	FI010	L3	QS101	E4	RP033	F13	TP023	E12
CL013	O9	CP097	G6	DL010	N10	FI050	M7	QV001	K5	RP037	D11	TP025	E10
CL021	L14	CR005	I4	DL011	N10	FP001	D13	RF004	J9	RP038	D11	TP052	H14
CL024	K14	CR009	I2	DL012	N9	FZP60	I11	RF006	K10	RP040	E13	TR005	I4
CL025	J13	CR071	O1	DL013	O9	FZP61	I9	RF007	K11	RP041	F14	TZ01	O14
CL026	J12	CS101	N4	DL021	L14	FZP66	F6	RF008	K10	RP052	H14	XRP1	P14
CL035	L9	CS104	G4	DL025	J14	FZP93	I9	RF009	K10	RP054	H14	XRP2	P14
CL040	O11	CS107	E5	DL030	L10	IF001	K9	RL001	M9	RP056	I14	ZP001	C10

MAIN BOARD - BOTTOM VIEW



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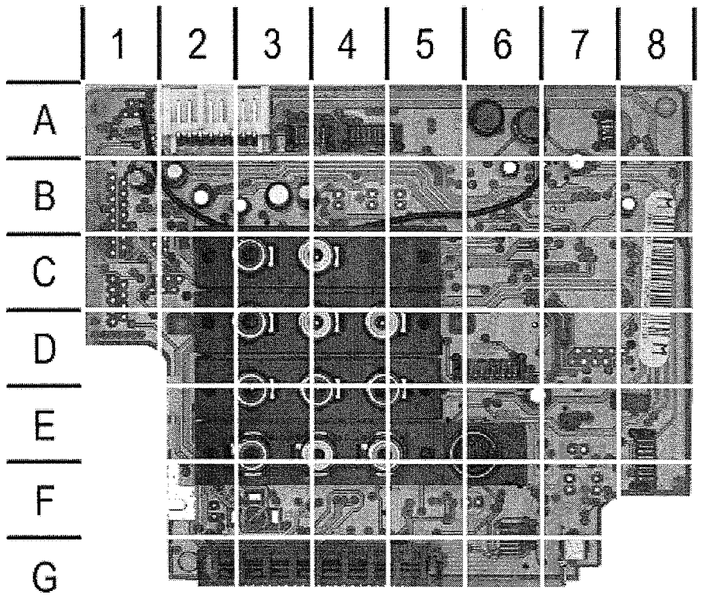
MAIN BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

CF004	J6	CS105	O11	CV005	K11	LI010	M13	RL036	M6	RR021	P8	RV017	K10
CH001	N13	CS106	G11	CV006	K12	RF002	K6	RL060	N6	RR022	I13	RV018	K10
CH002	N13	CS108	F11	CV007	K11	RF003	J6	RL061	P4	RR027	J10	RV019	L9
CH004	O12	CS111	F11	CV008	L11	RF101	J6	RL062	P4	RR043	O14	RV042	O10
CH005	O12	CS113	E11	CV010	L11	RF102	L7	RL063	P3	RR044	N14	RV044	O10
CH006	O12	CS115	F11	CV012	L11	RH002	O13	RL068	O3	RR052	I12	RV049	O9
CH011	P13	CS116	O11	CV014	J11	RH003	O13	RP125	F4	RR060	J11	RV051	P10
CI055	M11	CS118	O11	CV015	J11	RH005	O13	RP132	E4	RS101	O12	RV052	O11
CI058	K13	CS119	F11	CV019	K11	RH006	O13	RP150	J8	RS102	O11	RV070	M10
CI070	L9	CS123	C11	CV020	K10	RH010	N13	RP151	I1	RS109	C11	RV071	M11
CI073	M8	CS124	C10	CV021	K10	RI033	L13	RP153	I1	RS110	D10	RV074	M10
CI074	L10	CS125	C10	CV022	K10	RI051	M11	RP155	G1	RS111	D10	RZ01	P2
CI076	M9	CS126	C10	CV023	K10	RI060	M11	RP158	H1	RS112	D10	RZ03	P1
CL030	M6	CS127	D11	CV024	L10	RI070	L10	RP161	G8	RS113	D10	RZ09	O1
CL033	L4	CS129	E11	CV025	K10	RI071	M9	RP162	G8	RS116	F12	RZ11	N1
CL036	L4	CS130	D11	CV026	L10	RI072	M8	RP166	F9	RS130	G11	TI050	M8
CL061	P4	CS131	E11	CV027	L10	RI073	L9	RP175	C8	RS131	G11	TI060	M9
CP123	F4	CS132	E11	CV029	L11	RI074	L9	RP176	C8	RS201	F13	TI070	L8
CP131	G8	CS133	E11	CV033	N10	RI075	L9	RP190	E9	RS202	F13	TI090	N8
CP166	G8	CS134	G12	CV035	K9	RI076	O9	RP192	D9	RS203	G13	TL031	M6
CP198	D9	CS137	G12	CV040	O9	RI078	L8	RP196	D9	RS204	G13	TL060	M6
CR001	I13	CS139	F12	CV041	O10	RI079	L8	RP197	D9	RS205	G14	TL061	O4
CR002	J13	CS146	E12	CV042	O10	RI084	O8	RP199	E9	RS206	G14	TL062	O3
CR003	I13	CS147	E12	CV043	O10	RI085	O8	RR001	J13	RS207	F13	TP171	C9
CR004	J11	CS151	F11	CV044	O10	RI086	O8	RR002	I13	RS210	E12	TP175	C9
CR006	J11	CS152	F11	CV046	J9	RK001	A4	RR003	I13	RS211	E12	TP176	C8
CR007	J11	CS205	F14	CV051	P11	RK006	A4	RR004	I13	RS212	E13	TP177	C8
CR008	J11	CS208	D14	CV052	P11	RL003	N2	RR005	J11	RS215	G13	TP192	D9
CR010	J10	CS210	D14	CV070	M11	RL006	N5	RR006	J11	RS217	E13	TP193	D9
CR011	J11	CS212	E13	CV071	M10	RL008	N5	RR007	J10	RS218	E13	TR002	J9
CR021	P8	CS215	D12	CZ03	O1	RL009	N5	RR008	J10	RS220	E13	TS101	D11
CR024	P8	CS217	E14	DF101	J6	RL013	N2	RR009	J10	RS221	G14	TS201	E12
CR033	J11	CS218	F14	DS204	G14	RL018	N5	RR012	J12	RV001	K12	TS202	F13
CR057	N8	CV001	K11	DV070	N8	RL019	O5	RR013	J12	RV004	L11	TS203	F13
CS102	O11	CV003	K11	DZ01	P2	RL030	M6	RR019	I12	RV013	K10	TS204	G14
CS103	G12	CV004	K11	J1923	M11	RL032	L5	RR020	P8	RV016	K10		

MAV BOARD - TOP VIEW



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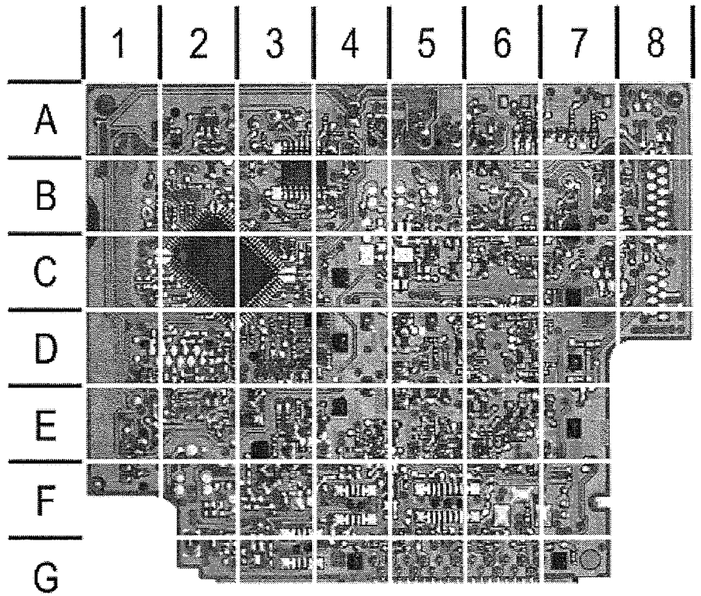
MAV BOARD - TOP VIEW, GRIDTRACE LOCATION GUIDE

BG407	A7	BX006	E8	CX026	B1	FZX001	E8
BK002	E5	BX007	A4	CX038	B6	LX003	A6
BK003	C5	BX100	G2	CX049	B3	LX004	A6
BK004	E6	CC101	B8	CX050	B3	TX508	E8
BX001	A3	CX001	B7	CX053	B2		
BX003	D6	CX014	E6	CX055	B2		
BX004A	A3	CX015	B8	CX078	B3		

MAV BOARD - BOTTOM VIEW



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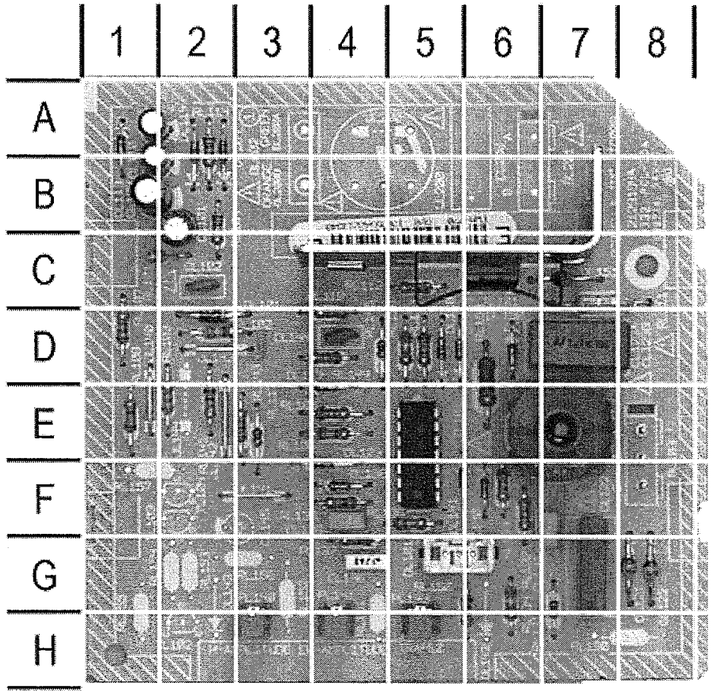
MAV BOARD - BOTTOM VIEW, GRIDTRACE LOCATION GUIDE

CC102	B5	CX542	F6	DX521	E6	DX546	E5	RC119	B5	RX549	B6	RX583	E5
CX506	B4	CX543	B2	DX522	E6	DX547	E5	RC120	B5	RX550	C6	RX584	C3
CX507	B3	CX544	C3	DX523	E6	IC101	B5	RC121	B5	RX551	A4	RX586	E6
CX508	D3	CX545	C2	DX524	E7	IX401	C2	RX501	B6	RX553	E2	RX594	E3
CX509	D2	CX546	B2	DX525	E5	IX402	B3	RX502	B6	RX554	E2	RX595	E3
CX510	G5	CX547	B2	DX526	E4	LX501	E3	RX506	B6	RX555	D1	RX596	E4
CX511	D2	CX548	B2	DX527	F3	LX502	A4	RX507	B7	RX557	G6	RX597	D5
CX512	A6	CX552	E6	DX528	F3	RC101	B5	RX508	C2	RX558	G6	RX598	D6
CX513	E4	CX558	D5	DX529	E3	RC102	B5	RX510	E2	RX560	B2	RX599	D6
CX515	E3	CX559	E5	DX530	E4	RC103	B5	RX511	A2	RX561	C6	RX600	E2
CX516	E3	CX560	E6	DX531	C7	RC107	B5	RX512	A2	RX562	C6	RX604	E2
CX521	D3	CX564	A7	DX532	C7	RC109	B6	RX513	E3	RX563	C6	RX605	E2
CX522	D2	CX565	A7	DX533	C5	RC110	B6	RX514	F3	RX564	C6	TC101	A2
CX524	A6	CX568	B1	DX534	C6	RC111	B6	RX518	C3	RX567	D5	TC102	A2
CX531	B4	CX569	A6	DX535	D1	RC112	B6	RX524	D7	RX568	E6	TX501	A2
CX532	E2	DX501	E3	DX536	D1	RC113	B6	RX525	D5	RX569	E5	TX502	E2
CX533	A4	DX502	B6	DX541	B6	RC114	B6	RX526	E5	RX570	E6	TX503	C5
CX534	B4	DX503	B2	DX542	B5	RC115	A6	RX535	D1	RX575	E4	TX504	B7
CX536	A3	DX504	D1	DX543	B6	RC116	A2	RX536	C3	RX577	B6	TX506	B6
CX537	B3	DX519	E5	DX544	E6	RC117	A2	RX537	C3	RX579	C7		
CX541	G7	DX520	E5	DX545	E6	RC118	B5	RX539	A4	RX581	C7		

PIN CUSHION BOARD



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PIN CUSHION BOARD, GRIDTRACE LOCATION GUIDE

BL101	G5	DL101	D2	DL151	C7	RL108	E1	RL137	G4
BL103	E8	DL103	F4	IL101	E5	RL110	D4	RL138	F4
CL101	B2	DL104	A2	LL122	E7	RL111	C7	RL141	E2
CL102	C2	DL113	A1	PL140	H3	RL112	C5	RL143	E3
CL103	B1	DL114	A2	PL141	H4	RL113	D5	RL144	D4
CL110	A1	DL117	E4	PL143	H5	RL114	A2	RL145	D4
CL114	A1	DL118	D5	RL101	C1	RL117	E3	RL150	G6
CL122	G7	DL119	D5	RL102	D2	RL118	D5	RL159	D6
CL123B	D7	DL122	G8	RL103	E2	RL131	G7	TL101	C6
CL131	F7	DL138	F4	RL104	B2	RL132	F6		
CL136	G4	DL140	F6	RL105	E4	RL133	F6		
CL138	F4	DL141	F6	RL106	E4	RL134	G6		
CL144	D4	DL150	D6	RL107	D1	RL136	F5		

Important Parts Information

- **Parts not listed in the parts list are commonly available at your local electronics parts retailer.**
- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- Where items may be replaced with equivalent parts, several alternates are shown from participating vendors.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

Obtaining Parts

Many of these parts are available from your local Sams authorized distributor or the manufacturer of the equipment. Call Sams for the name of your nearest distributor:

800-428-7267

Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors.

- NTE Electronics, Inc. (NTE)
- Sencore, Inc.

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PARTS LIST

Item No.	Type No.	Mfr. Part No.	NTE Part No.
CV020, 21, 22	-	263625	-
DB004	-	257783	-
DB030, 31	-	230757	-
DB050, 51	-	230757	-
DB070, 71	-	230757	-
DF001	-	261158	-
DF002, 03	1N4148	198589	NTE519
DF010	-	259231	-
DF101, 02	-	248798	-
DH001	-	215489	-
DJ009 (1)	-	215488	NTE136A
DJ009 (2)	-	243276	-
DJ010	-	215488	NTE136A
DK003, 04	-	215488	NTE136A
DK005, 06	1N4148	198589	NTE519
DL004	-	231093	-
DL010	-	244870	-
DL011	-	259231	-
DL012	-	259601	-
DL013	-	259231	-
DL021	-	242907	-
DL025	-	244870	-
DL030	1N4148	198589	NTE519
DL035	-	259231	-
DL040, 60	-	244870	-
DL062	1N4148	198589	NTE519
DL072	-	248798	-
DL101	-	244870	-
DL103	1N4148	198589	NTE519
DL104	-	231093	-
DL113, 14	1N4148	198589	NTE519
DL117, 18	1N4148	198589	NTE519
DL119	-	260726	-
DL121, 22	-	244834	-
DL138	-	259549	-
DL140, 41	-	232622	-
DL150	-	260726	-
DL151	-	263576	-
DL801, 02	1N4148	198589	NTE519
DP002	-	263582	-
DP003	-	263582	-
DP004, 05	-	263582	-
DP023	-	232545	-
DP025, 26	-	244870	-
DP027	-	244835	-
DP030	-	232545	-
DP033	-	223694	-
DP036	1N4001	198597	NTE116
DP037	-	230757	-
DP040	-	244835	-
DP057	-	232622	-
DP061	-	244834	-
DP063	-	243844	-
DP071	1N4148	198589	NTE519
DP080	-	263632	-
DP093	-	244834	-
DP095	-	215488	NTE136A
DP097	-	230757	-
DR001	-	215488	NTE136A
DS101	1N4148	198589	NTE519
DS201	-	244834	-
DS204	-	248798	-
DV002, 03, 04	-	263625	-
DV070	-	248798	-
DV071	1N4148	198589	NTE519
DX501	-	263630	-
DX502	-	248798	-
DX503	-	243276	-
DX504	-	243897	-
DX519 Thru			
DX536	-	243276	-
DX541, 42	-	243276	-
DX543	-	248798	-
DX544 Thru			
DX547	-	243276	-
# **DZ01**	-	248798	-
# **DZ03**	-	260589	-
# **DZ05**	1N4148	198589	NTE519
GK02, 03	-	263282	-
IB001	-	263568	-
IC101	-	263573	-
IF001	-	232109	NTE1788
IL101	-	263569	-
# **IP001**	-	257786	-
IP030	-	263567	-
IP031	-	215528	-
IP050	-	231525	-
IR001	-	244898	-
IS100	-	263572	-
IS200	-	215526	-
IV001	TDA9378	264079	-
IX401	LA79500E	262444	-

PARTS LIST continued

Item No.	Type No.	Mfr. Part No.	NTE Part No.
IX402	-	263571	-
TC101, 02	-	256808	-
TI050	-	256808	-
TI060, 70, 90	-	259545	-
TL031	-	259545	-
TL033	-	259531	-
TL035	-	230760	-
TL060	-	259548	-
TL061	-	263641	-
TL062	-	259545	-
TL101	-	256868	-
TL801	-	259513	-
TL802	-	219354	NTE188
TL803	-	215977	-
TP020	-	256828	-
TP022	-	198743	NTE123AP
TP023	-	257827	-
TP025	-	230764	NTE159
TP052	-	198743	NTE123AP
TP171, 75, 76, 77	-	219349	NTE2408
TP192	-	219348	NTE2409
TP193	-	219349	NTE2408
TR002	-	259547	-
TR005	-	219354	NTE188
TS101	-	219349	NTE2408
TS201	-	219349	NTE2408
TS202, 03	-	206088	NTE2414
TS204	-	219349	NTE2408
TX501	-	263682	-
TX502	-	219349	NTE2408
TX503, 04	-	259545	-
TX506	-	225588	-
TX508	-	257827	-
# **TZ01**	-	147665	NTE159

Item No.	Function/Rating	Mfr. Part No.	Notes
# **BB005**	Socket	233120	CRT
BJ110	Jack	250673	Assembly
BK002	Jack	263656	Assembly
BK003	Jack	263671	Assembly
BK004	Jack	263663	Assembly
# **CB001**	.01 3kV	257795	-
# **CB006**	10µF 20% 250V	223809	-
CH005, 06	33pF 50V NPO	256816	-
CJ102, 03	330pF 50V NPO	256821	-
CL010, 12	330pF 20% 1kV	259366	-

Item No.	Function/Rating	Mfr. Part No.	Notes
# **CL021**	.0167 3.5% 1.6kV	263585	-
# **CL024**	.55 5% 250V	214753	-
CL026, 40	330pF 20% 1kV	259366	-
CL102	330pF 20% 1kV	259366	-
# **CL122**	.027 5% 400V	263590	-
# **CL123B**	2.7µF 10% 100V	263596	-
CL144	100pF 20% 1kV	263608	-
# **CP002**	.22 20% 275V	263691	-
# **CP004, 05, 06**	.0015 20% 1kV	263607	-
# **CP008**	680µF 20% 200V	190560	-
CP009	.0022 20% 1.6kV	263583	-
# **CP015, 18**	.0022 20% 250V	248747	-
CP022	470pF 5% 50V N1500	198572	-
CP026	330pF 20% 1kV	230972	-
CP038, 39	180pF 5% 50V N150	251318	-
CP060	330pF 20% 1kV	230972	-
# **CP062**	1000µF 20% 25V	201162	-
CP063	330pF 20% 1kV	230972	-
# **CP064**	1000µF 20% 25V	201162	-
CP068	330pF 20% 1kV	230972	-
CP088	.0022 20% 2kV	227078	-
CP093	330pF 20% 1kV	230972	-
# **CP094**	1000µF 20% 25V	201162	-
CR002, 03, 04	100pF 50V NPO	256818	-
CR021, 24	100pF 50V NPO	256818	-
# **CRT** (1)	CRT	HA90AEJ159	A90AEJ15X09
# **CRT** (2)	CRT	HA80AEJ159	A80AEJ15X09
CS116, 18	330pF 50V NPO	256821	-
CS123	100pF 50V NPO	256818	-
CS130	56pF 10% 50V NPO	243363	-
CS132, 33	2.2pF 10% 50V NPO	263648	-
CS146, 47	47pF 10% 50V NPO	256817	-
# **CS206**	2200µF 20% 25V	260637	-
CV040, 41	100pF 50V NPO	256818	-
CV042, 43, 44	47pF 50V NPO	256817	-
CX541, 42	100pF 50V NPO	256818	-
CX559, 60	100pF 50V NPO	256818	-
# **CZ03**	.22 +80% -20%	243641	-
# **DEGAUSS** (1)	Degaussing	263562	-
# **DEGAUSS** (2)	Degaussing	263557	-
FI010	Filter	263690	45.75MHz
FI050	Trap	219314	4.5MHz
# **FP001**	Fuse	175425	5Amp, 125V
# **FZP60, 61**	IC Protect	259219	3.15Amp, 125V
# **FZP66, 93**	IC Protect	260617	500mAmp, 125V
# **FZX001**	IC Protect	260617	500mAmp, 125V

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PARTS LIST continued

Item No.	Function/Rating	Mfr. Part No.	Notes
# **FZX02**	Fuse	263678	315mAmp, 125V
GK001	Receiver	245541	Remote
LH010	10µH	214580	-
LI010	1µH	243496	-
LI031	12µH	257828	-
LI032	10µH	214580	-
LI033	10µH	263702	-
# **LL005** (3)	Horizontal Output	262342	-
# **LL026**	16.5µH Horizontal Linearity	263687	-
# **LL032**	Horizontal Drive	263679	-
LL040	10µH	214580	-
# **LL122**	650µH	256791	-
# **LP002**	Line Choke	263675	-
# **LP003**	SMT	262349	-
LP020	Ferrite Bead	244840	-
LP025	Ferrite Bead	235858	-
LP081	Ferrite Bead	244840	-
LR001	10µH	263702	-
LR002	Ferrite Bead	244840	-
LS105	10µH	263702	-
LS106, 07	1µH	248755	-
LS108	10µH	263702	-
LV001	10µH	214580	-
LV002, 03	10µH	263702	-
LV004	10µH	214580	-
LX003, 04	220µH	259237	-
LX501, 02	10µH	248869	-
NH001	Tuner, Circuit	248782	CTF5800
PL140	4700 Horizontal Amplitude	263581	-
PL141	470 Pin Cushion Correction	263580	-
PL143	4700 Trapezium	263581	-
QS101	Filter	263646	18.432MHz
QV001	Filter	259636	12MHz
# **RB001, 04**	1500	244871	-
# **RB013**	10	241261	-
RF004, 06	1910 1% 1/4W	263619	-
RF007	1 1%.7W	258715	-
# **RF008**	1.5 5% 1/4W	256797	-
RL002	75K 1% .4W	263623	-
# **RL010**	.1 10%	220609	-
# **RL012**	.22 5%	247263	-
# **RL040**	47 5%	244866	-
RL068	1000 1%	252359	-
# **RL101**	18 5% 1/4W	220605	-
# **RP001**	1.6 10% 10W	263602	-
# **RP003**	PTC	207768	-
# **RP009**	470K 5% 1W	263654	-
# **RP015**	8.2M 10% 1/2W	234388	-
# **RP016**	1.8M 10% 1/2W	220333	-
RP056	130K .1%	247719	-
RP158	2490 1% 1/16W	263649	-
RP161	3920 1%	253727	-
RP162	1690 1%	262451	-
# **RS103**	3.9 5% 1/4W	230997	-
# **RS216, 19**	4.7 5% 1/4W	235901	-
RV004	39.2K 1%	253848	-
# **RZ01**	100 5% 1/16W	243653	-
# **RZ03**	10K	242690	-
# **RZ05**	29.4K 1% 1/4W	197519	-
RZ07	24.4K 1% 1/4W	151883	-
# **RZ09**	1500 5%	256759	-
SK101	Switch	257040	Channel -
SK102	Switch	257040	Channel +
SK103	Switch	257040	Volume -
SK104	Switch	257040	Volume +
SK105	Switch	257040	Menu
SK106	Switch	240098	Power
# **SP001**	Relay	256573	Degaussing
SP1, 2 (1)	Speaker	226332	90mm, 8 Ohms, 5W
SP1, 2 (2)	Speaker	234543	2.25" X 5", 8 Ohms, 5W
# **YOKE** (4)	-	-	-
# **ZP001**	ERZV14D511	247377	-
	Fuse Holder	244842	-
	PC Board	265079	CRT
	PC Board	263365	EFC
	PC Board	263370	Pin Cushion (EWM)
	PC Board (1)	263375	Front A/V Input
	PC Board (2)	263377	Front A/V Input
	PC Board	263386	Front Panel
	PC Board	263404	MAV
#	PC Board	263565	Rear Jack
	Power Cord	263429	AC, Polarized
	Transmitter	260605	Remote, RCR311TBM2

 # For SAFETY use only equivalent replacement part.

% Lead configuration may vary from original.

(1) Used in model 36V430TYX1.

(2) Used in model 32V430TYX1.

(3) Screen and focus controls are part of LL005.

(4) Bonded part of CRT.

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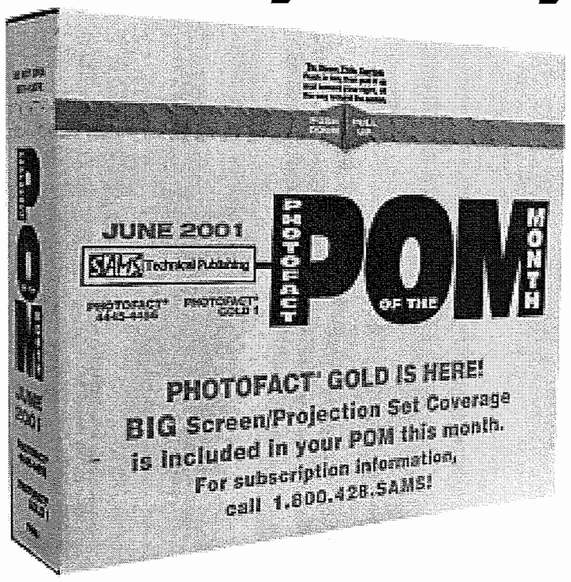

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